

THE
AMERICAN PRACTITIONER:

A MONTHLY JOURNAL OF

MEDICINE AND SURGERY.

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THE AMERICAN PRACTITIONER.

NOVEMBER, 1879.

Certainly it is excellent discipline for an author to feel that he must say all that he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else.—RUSKIN.

Original Communications.

THE ELEMENTS OF SURGERY.

BY JOHN CHIENE, M. D., F. R. C. S. E.

Surgeon to the Edinburgh Royal Infirmary, etc., etc.

LECTURE IV.—SUPPURATION.

The Varieties of Pus: Laudable, Specific—Whence the Pus Corpuscle?—The Conditions of Pus—Causes of Suppuration: Internal or Predisposing, External or Exciting—Aseptic and Septic: Mechanical and Chemical—Examples—Putrefaction—Definitive Cause—A Fermentation—The Germ Theory of Putrefaction.

The last lecture was devoted to the causes, symptoms, and treatment of inflammation.* Inflammation is the result of the application of an irritant, which may act directly on the tissues to which it is applied, or indirectly through the nervous system. I have already described the local phenomena. I have tried to show how the injured part recovers. The return to health takes place by resolution, absorption, and

* *Wildbad, Germany, August 30, 1879.*—An apology on my part is certainly due to the Editor, for my delay in forwarding to him this lecture in time for the September number. If any of his readers have noticed the break in the appearance of these lectures, it is but right that they should know who is to blame; perhaps they will forgive me when they note the place where this is written; and remember that it is a *health* resort of no mean repute.

Erratum.—For *antiseptic* read *aseptic*, in August number of the American Practitioner, page 75, thirteenth line.

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Paged wrongly.

organization. In connection with a wound, we term this the process of repair. If the action of the irritant is continued, if the inflammation is of a severe type, if the patient is weakly, or if the treatment is faulty, then recovery does not take place—a passage onwards and *downwards* takes place. The injured part can not stand still—either recovery or local death must take place. We have considered the recovery; we have now to consider the local death. There are three phases of this death—suppuration, ulceration, mortification—which differ only in degree.

Suppuration or the Formation of Pus.—It is not necessary to do more than mention the different varieties of pus. We have a standard pus,—viz, healthy or “laudable.” (?) We have various departures from this standard; hence the terms grumous, ichorous, serous, curdy, specific, etc. It will generally be found that the greater the tension the thicker is the pus. It is serous in those cases in which the tension is slight. Some surgeons look on pus as a something to be courted—on its appearance as by no means an evil; hence the term “laudable.” In a very limited sense they may, perhaps, be right. An epidemic of cholera or a war may be useful in clearing away the excess of the population; an attack of diarrhea may wash away some irritating material in the intestinal canal; a bleeding from the nose may save one from an apoplexy; a good sound thrashing may at times act beneficially, so also may a blister. These means are all *curative*, and require a preëxisting diseased condition; and in so far, and no further, may we look on pus as laudable. Let us, however, never forget that the appearance of pus means a waste of the tissues—a local death—a corpuscular death rate, excessive in amount, which is to be likened to the excessive death-rate still prevalent in certain districts. Whenever pus appears it means a diseased wound, as certainly as a high mortality in a town means something wrong with the drainage or water supply. We now have sanitary inspectors who, by *prophylaxis*, prevent a high mortality in districts under their charge. So also the surgeon can, by prophylactic measures—for example,

a drainage-tube, antiseptic precautions—prevent disease in wounds, and prevent the necessity for the appearance of pus. I again repeat that a wound will heal without pain or any uneasiness whatever, if it is properly treated, and that the process of recovery by which a wound unites is not a disease, and that even “laudable pus” itself should not be looked on as a necessary evil.

The term specific pus is often used—(it is a cloak to ignorance); pus with certain peculiarities, as, for example, in a gonorrhea caught in the usual way. How different this disease from a purulent urethritis—the result, it may be, of excessive sexual intercourse, or the rough passage of a bougie. The difference has yet to be traced; it is a subject well worthy of study. One great difficulty in the investigation undoubtedly exists in the separation of the specific poison from the admixture of the causes of common putrefaction. Speaking from some clinical experience, I am inclined to the opinion that when a clap is cured in a few days, it must have been a simple urethritis, and not due to the planting of that specific something (undoubtedly endowed with life, and which may be called a germ), which gives rise to the common gonorrhea, which runs a course of four to six weeks as certainly as the crisis in typhoid fever is reached at the end of the third week.

It is not required that I should discuss here the question which must be solved by the pathologist,—Whence the pus corpuscle? Is it the result of the proliferation of the cellular elements in the extra-vascular tissues of the inflamed part—a doctrine first enunciated by Goodsir, and elaborated by Virchow? Is it, as Cohnheim and others teach, a white blood corpuscle, which has migrated from the vessels through the vessel walls? Is it a result of the proliferation of the white blood corpuscles after their escape from the vessels? That the white blood corpuscle does pass through the walls is an undoubted fact. That white blood corpuscles collect in inflamed tissues in great profusion is also very evident. What bearing these facts have on the origin of the pus corpuscle is still *sub judice*. In all probability both factors are at work.

In tissues, such as cartilage and cornea, the preëxisting cell elements, by their proliferation, supply the pus corpuscle; in vascular tissues, the migratory white blood corpuscle may be afterwards proved to be the pus corpuscle.

Pus, as we meet with it in the body, may be in one of three conditions—

- (1.) *Aseptic*,—free from putrefaction, free from smell.
- (2.) *Septic*,—putrid, with a more or less distinctly marked odor of putrefaction.
- (3.) *Aseptic, but fetid*,—stinking.

The first condition is by far the most frequent—as in any unopened abscess. The second condition is met with in abscesses communicating with the external air, or with any of the canals in the body which contain the causes of the putrefaction. The third condition requires a word of explanation. In some abscesses (in the perineum, in the ischio-rectal fossa, and sometimes in the iliac fossa, in close proximity to the intestinal canal), when opened, the pus has an intensely disagreeable odor. If the pus from such an abscess is examined microscopically, bacteria may or may not be present. In some none are seen; and if, in such a case, the pus, with aseptic precautions, is inoculated into a flask containing a sterile solution of Darby's extract of meat (a most putrescible fluid), no result follows, showing conclusively that the fetid fluid does not contain living causes of putrefaction. The stinking pus may be, in all human probability is, the product of putrefaction, just as the smoke from an ignited charge of gunpowder is the product of the gunpowder. In those cases in which bacteria are found, on opening an abscess, there must be either a communication with a canal containing them, or it may be that they make their way from the blood-vessels in which, in certain diseased conditions, they are known to exist. The fact that the causes of putrefaction seem unable to pass through the tissues from the intestinal canal into an abscess cavity near it, while the products of putrefaction pass with ease, seems to be another proof that the causes of putrefaction are *particulate* and not in chemical solution. Mr. Lis-

ter proved this with regard to Edinburgh drinking water, and drove another nail into the coffin of the theory that the causes of putrefaction may be found by, nay arise out of, a combination of chemical atoms.

Causes of Suppuration.—Any cause which gives rise to the primary inflammation will, if persistent or powerful, give rise to suppuration. (See Causes of Inflammation, American Practitioner, August, 1879, page 66.) An unsound constitution, an intense inflammation, the peculiar character of the inflammation, as in small-pox and some varieties of erysipelas, all rudimentary tissues as granulation tissue, may be taken as examples of *predisposing* causes to suppuration. They act from *within*; difficult to foresee, difficult to prevent, often interfering with the healing of a wound, they must never be forgotten. It is, however, different with the external causes acting from *without*,—local in their action, directly applied to the wound, it is much more easy to defend the wound from such an attack.

It is to these external causes that I desire to direct special attention. A clear understanding of these causes of suppuration will go a good way towards clearing away many misunderstandings regarding "Lister's Antiseptic Method," and will illustrate the principles on which the practice is based; understand the principles—being understood, the practice will follow. There is nothing which Lister has laid more particular stress on than this—"Understand the principles on which I work before you practice the art." Much confusion has followed and many mistakes have been committed by those who have not studied these principles, and who have supposed that the purchase and use of a spray-producer, the enveloping of the limb in layers of antiseptic gauze, after dosing the poor wound with carbolic lotion from a large syringe, is all that is required in order to carry out Lister's system. How often do they find that the wound suppurates; it would be a wonder if it did not.

The conclusion is arrived at "the system is at fault." But the deduction is an erroneous one. Suppuration may have

resulted from the abuse of the means used. Carbolic acid is an irritant; apply it in a strong solution, or with a daily persistence, as many do, and suppuration will result. *Carbolic acid is the evil of the antiseptic system.* The less that gets to our wounds, the better for our patients; it must be used, and we must understand why it is used before we can use it properly. The Lancet, in the early days of antiseptic surgery, when the system was in its infancy, said, "Lister's arguments are getting stronger and his solutions are getting weaker." Lister's arguments were getting stronger *because* his solutions were getting weaker. He was gradually finding out that the strength of the carbolic acid could be diminished, and that he still could prevent putrefaction. He was diluting the evil without interfering with its efficiency; he irritated the wound less,—the wound healed more kindly. Hence the good results were more constant. Suppuration, in consequence of the carbolic acid, occurred less frequently than in the early days when it was used in too concentrated a form. Take a wound in a healthy man; stitch it up closely, allow the effusions no room for escape—these effusions, at first serous, soon become purulent: here tension is the cause of the suppuration—the retained effusions act mechanically on the tissues, and by their pressure they cause increased irritation—suppuration is the result. Apply too tight a stitch, soon a circle of redness is seen round the stitch, and if the stitch is not cut a drop of pus forms, the tissues break down, the stitch is loosened; here the pressure of the too tight stitch acts mechanically and causes suppuration. Apply to an open wound any irritant, such as nitric, sulphuric or carbolic acid, and suppuration will occur; the irritant here is a chemical one. Lastly, neither stitch your wound nor apply any chemical irritant, and the wound may suppurate. Here the suppuration is due to some irritant which has also been applied to the wound. We may not see it, although its consequences are soon very evident. Putrefaction has occurred.

Lister first showed that putrefaction can be prevented. He said prevent putrefaction, and you will prevent ONE of the

causes of suppuration. He never lost sight of the fact that there are other causes of suppuration over which antiseptic precautions have no direct control; and he also showed that antiseptic precautions are a direct cause of one variety of suppuration—that, namely, which is due to carbolic acid. He adopted other means against these causes. He prevented tension by the systematic use of a drainage tube; he took care not to stitch his wound too tightly, knowing well the evils of a tight stitch. He diluted the carbolic acid which he used. He undoubtedly used it too strong at first, but gradually he found out the strength which was necessary in order to prevent putrefaction. At one time he used the lotion too weak, but a few failures showed that he had gone too far in his anxiety to avoid irritation. He felt his way, and always keeping in view, on the one hand, the evil of too free a use of the agent, and, on the other hand, never losing sight of the great object he had in view in using it at all, he at last struck the happy mean, whereby he was enabled to prevent putrefaction, without at the same time applying too powerful a local irritant. It is a misfortune, and no one regrets it more than Lister himself, that the system ever received the name of the “carbolic acid system.”

Surgeons thought, and some still think, that the more carbolic acid the better, forgetting that in this as in everything else—be it wine, be it food—we may have too much of a good thing.

I have thought it right to make these remarks, because a daily syringing of wounds is still called “Lister's treatment;” say in an amputation at each dressing, or in an abscess after opening, then suppuration occurs, and Lister has to bear the blame. Not a drop of carbolic acid should reach the cavity of a stump or an abscess cavity. The practice which will soon receive our attention will illustrate this. I would just ask why syringe your wound cavity? Is there anything mischievous in it that you want to destroy? Is it done to encourage healing? Is it used to wash away something hurtful? It is for those who use it to answer these questions. Let it

be distinctly understood that Lister never advocated any such treatment. Carbolic acid must reach the wound during the operation. Carbolic acid lotion must be injected into the cavity of an accidental wound. After the drainage is introduced and the wound stitched up, then no more carbolic acid is to reach the cavity; it is hurtful to the healing process. If surgeons will inject carbolic acid at the daily dressings, then they must not say that they are following "Lister's method."

I have already mentioned the principal predisposing internal causes of suppuration. The external or exciting causes may be divided into the *aseptic* and the *septic*. Each of these divisions may again be divided into the mechanical and the chemical. We have, then, four varieties:

1. Aseptic mechanical.
2. Septic mechanical.
4. Aseptic chemical.
3. Septic chemical.

Examples of each will best illustrate the meaning of these terms. Sepsis is equivalent to putrefaction.

1. *Aseptic mechanical*—A chemically clean bullet or a thorn; a non-putrid slough or blood clot; aseptic effusion in a wound, be it serum or pus; pus in an unopened abscess; a chemically clean silver stitch.

2. *Septic mechanical*—A bullet or a thorn which carries in along with it the causes of putrefaction; a putrid slough or putrid blood-clot; putrid serum or pus in a wound; a silk stitch.

3. *Aseptic chemical*—Iodine; sulphuric, nitric, carbolic acid; caustic potash, etc.

4. *Septic chemical*—The products of putrefaction; sulphuretted hydrogen, ammonia and its compounds, carbonic acid, butyric acid, etc.

It is now necessary to say a few words regarding sepsis or putrefaction. Putrefaction is the series of changes which take place in substances containing nitrogen, when placed under the following conditions:

First, the vitality of the substance is gone or lowered; second, the substance is exposed to air or water at a temper-

ature between 212° Fahr. and 32° Fahr. The vitality is gone when we die. The vitality is lowered when the tissues are injured. Exposure to the air is necessary. Tinned meats do not putrefy because they are not exposed to the air. Exposure to water is necessary. Meat or fish which has been dried is not prone to putrefaction. If the substance is kept above, or even near boiling point, it will not putrefy; so also if it is frozen, it will not putrefy.

We have next to consider the cause of putrefaction. If we examine putrid matter, we find in it numbers of rod-like bodies, which are termed bacteria. These bacteria are living; they have all the characteristics of life; they move, they propagate like bodies; they require certain conditions for their existence; they require more favorable conditions for their growth and propagation. They are seen in putrid matter. Are they the *cause* or the *result* of the change which is termed putrefaction? That they have something to do with the process is very evident. Putrefaction is allowed to be a form of fermentation, and we may liken it to the well understood variety of fermentation termed alcoholic fermentation. If to sugar we add the yeast-plant—a living organism—and keep it at a certain temperature, we find after a time that the sugar is converted into alcohol and carbonic acid; these are the products of the fermentation. We also find that the yeast plant is increased in quantity. The yeast-plant causes the change in the sugar, and it grows at the same time that the change is taking place. The bacterium is the yeast plant; the nitrogenous substance—say a solution of meat—is the sugar. The products of putrefaction—analogue to the alcohol and carbonic acid—are sulphuretted, hydrogen, carbonic, butyric, valerianic acids, ammonia and its compounds, etc. These products are the septic chemical irritants, and they result from the nitrogenous substance on the addition of the bacterium, in the same way that the alcohol and carbonic acid result from the sugar on the addition of the yeast-plant. The bacterium, then, is the cause and not the result of the sepsis or putrefaction.

Another question is mixed up with the origin of putrefaction. Do these organisms arise from parents, or can they be formed *de novo*? It is now hardly necessary to consider this question, as almost all are now agreed that Pasteur was right when he asserted that these organisms arise from parents, and that spontaneous generation is no more true of the bacterium than it is true of the yeast-plant, the maggot in meat, or the mite in cheese. When Lister proved that the causes of putrefaction are *particulate* and not in chemical solution, he made a great advance, and his experiments, to my mind, go far to prove that life can not arise without preëxisting life.

The *germ theory of putrefaction* asserts, first, that living organisms are the cause of putrefaction; second, that these organisms arise from parents; third, that they are planted in the substance which putrefies; fourth, that putrefaction is the result of the growth of these organisms in the substance which putrefies. Certain substances termed antiseptics interfere with this change, and they interfere by destroying the organisms which cause the change.

We have then to note that we have to deal with two factors, a living organism and a nidus for its life--a plant, and the soil in which it is planted. We will see, in the next lecture, that the growth of the organism can be interfered with in two ways. We may destroy the organism, or we may render the soil in which it grows unsuitable for its development. The object which the surgeon has in view may be likened to the daily work of the farmer in preventing weeds from growing on his land. The farmer either attacks and destroys the weeds, or mixes something with his soil which will prevent the weeds from growing. This is the problem difficult for both surgeon and farmer, and the solution of this problem is antiseptic surgery. In the next lecture, I will try and show that the surgery of the present day is a more or less perfect attempt to interfere with these organisms which cause putrefaction. The methods are very various. We will need to try and come to a decision as to which is the best.

UTERINE DISPLACEMENTS.

A NEW THEORY AS TO THEIR MECHANISM AND PROPER
TREATMENT.*

BY GEORGE COWAN, M. D.

Mr. President:—It would argue a somewhat presumptuous spirit, and prove a serious waste of the time of this society, for your committee, and possibly for any one, to undertake the task of making a complete and exhaustive report of uterine displacements, at a time when the literature of the subject is so rich and full. Your libraries, and doubtless your minds too, are well stored with the accurate and graphic works of modern gynecology, in which are to be found all of the material facts of modern research and observation, far better arranged for your study and ready reference than your committee could ever hope to present them. Such a view, however, of our subject, turns our attention at once to the alternate horn of a serious dilemma which your committee has carefully considered and deliberately chosen.

Failing to find any satisfactory reason for presenting such a report, there could be but one other call or excuse for an effort upon the part of your committee to make any report whatever, and upon your part for the expenditure of your time and patience in listening to it. Your committee believes that the presentation of *a new idea*, or at least the honest effort so to do, is the only allowable plea for undertaking the task assigned him. Whether or not anything shall be presented which can be claimed to advance the progress of discovery, or to add one single new idea to our present stock of knowledge, it is for yourselves to determine. But as I have said, your committee could not feel authorized in occupying your time with anything less worthy of your attention than with some effort, made with singleness of purpose, however

* Read before the Kentucky State Medical Society, May 15, 1879.

disastrous a failure it may prove, to throw some new light on this confessedly difficult subject. The bare recital of the well established facts of observation, already in the possession of the profession, no matter how well performed the task, might well be considered, both on the part of yourselves and any committee you might have selected, unnecessary, and a serious offense against good taste.

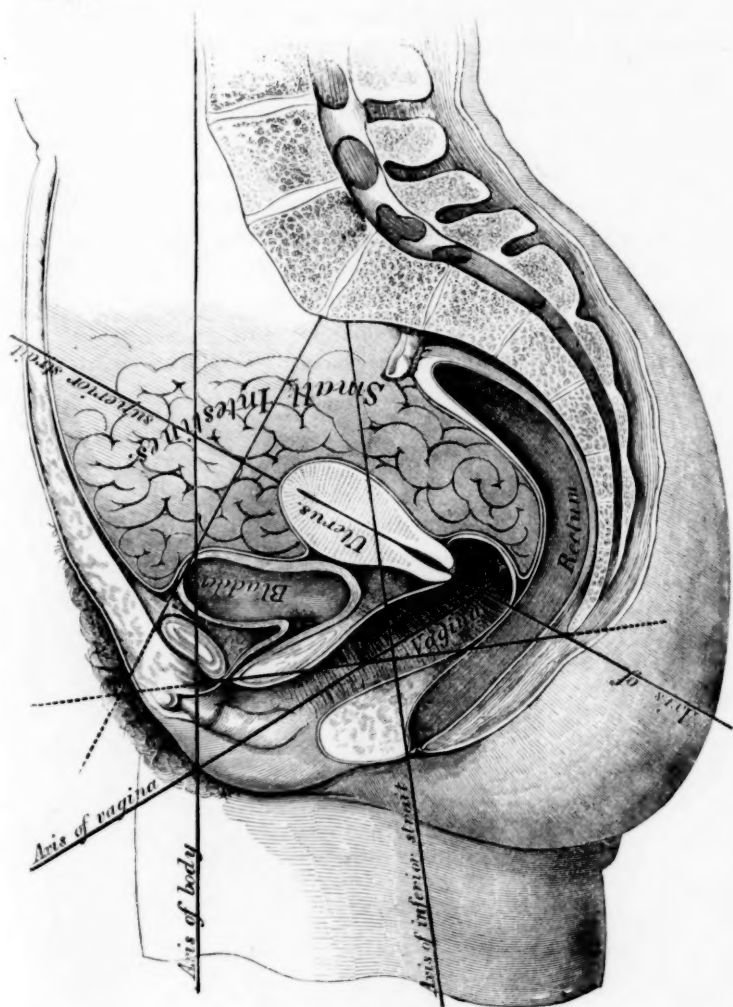
I shall therefore only state, or refer to, such of these facts as shall bear upon the elucidation of the proposition I shall try to maintain, and which without further delay I will now state and proceed to discuss.

I shall endeavor to prove, that in the etiology and management of the various forms of displacements of the uterus, those forces which are regarded by the best authorities as the principal natural supports of that organ, are in reality but *accessory* agents in effecting this end. By poising the organ on its proper axis, so as to receive to the best advantage the bearing of the force which supports it, these are subsidiary then to that force, which alone from the mechanism of the abdominal and pelvic cavities is capable of acting in antagonism to the law of gravity. *This force I announce is derived from the weight and pressure of those viscera of the abdominal cavity which overhang, or rather overarch the uterus; and are projected by the position and arrangement of their suspensory ligaments, against a series of planes, so as to fall into the pelvic cavity in front of the uterus and alongside of it.*

In support of this proposition, I beg to offer the following considerations deduced from an examination of the topography of the abdominal and pelvic cavities, and their contained viscera, as they are presented to us in vertical sections of these cavities.

It is true we only have one such section ever made, and presented to us in anatomical works, in a diagram, and this passes through the mesian line. In reasoning out the effect of the weight and pressure of the intestines as they are acted upon by the walls of the abdominal cavity, and as they are presented to the eye in this one diagram, we must bear in

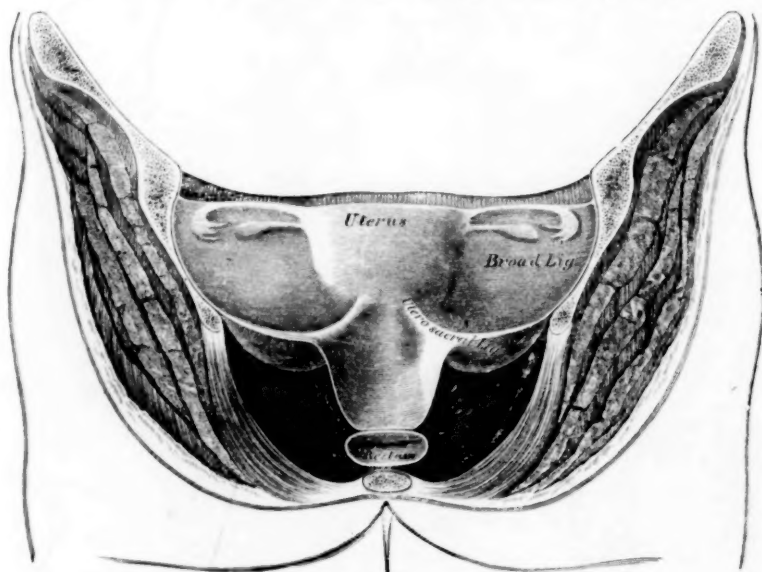
mind that a variety of vertical sections passing through the center of this great abdomino-pelvic cavity is required, to present to the mind's eye, a correct idea of the true relation of the various contents of this cavity, one to another, and to its parietes.



No. 1,

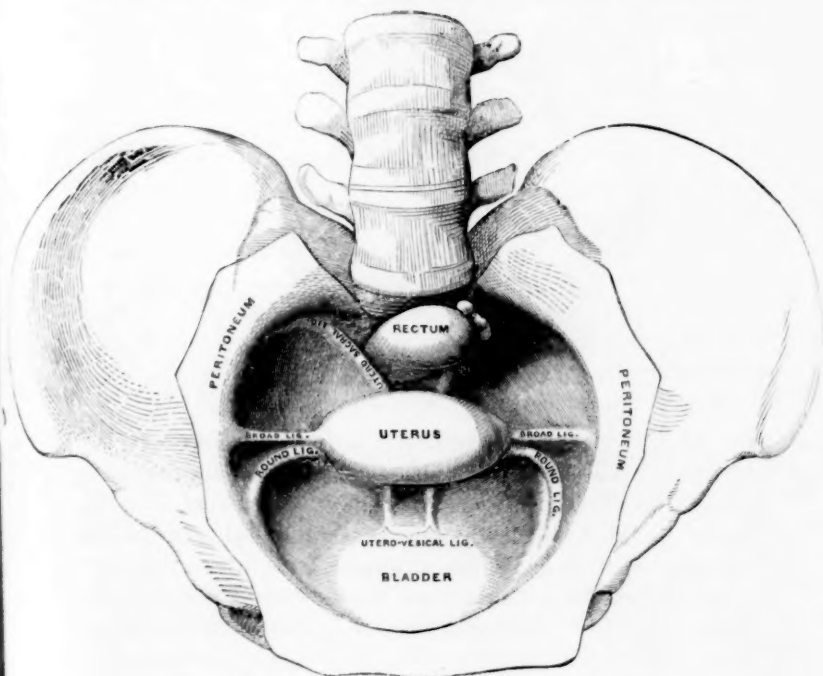
Keeping these suggestions in view, we will now examine these enlarged diagrams of Prof. Hodge, and of Dr. Breisky, which I have had placed on the wall, in order to illustrate the position I have taken as regards the natural support of the uterus.

We have here a view of the viscera of the pelvic cavity in vertical, horizontal, and partly oblique sections. In plate No. 1, from page 237 of Prof. H.'s work, we have displayed, according to his theory, "the natural position of the pelvic viscera." It is desirable to call particular attention, in this diagram, to the line which represents the axis of the body. This line, commencing at the junction of the second and third lumbar vertebra, is let fall as a perpendicular upon the symphysis pubis, which it strikes upon the inner surface, passing through its center. Observe also the angle which the axis of the vagina is represented as making with the axis of the superior strait and uterus, measuring about sixty degrees.



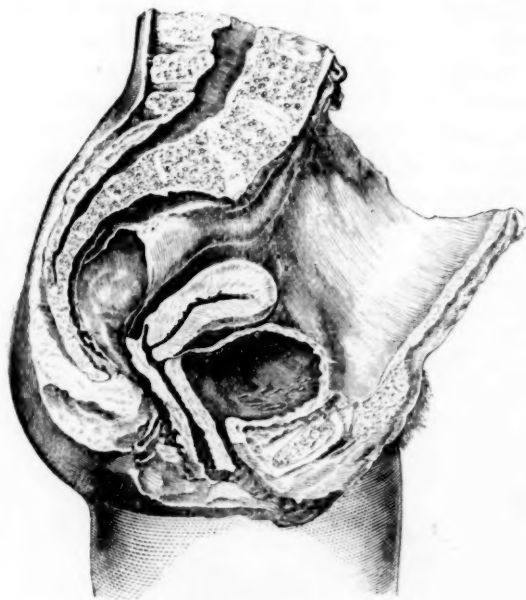
No. 2.

The great space between the rectum and uterus, occupied by a portion of the small intestines, is also particularly noticeable. In plate No. 2, from page 242, same author, we have a posterior view of the uterus and its ligaments. The section here made through the pelvis must be an oblique one, on account of the lines of attachment of the broad ligaments to the inner surface of the pelvis, just in front of and parallel with the anterior edge of the great sacro sciatic notch. In No. 3, taken also from Prof. H.'s work, page 243, we have a view of the uterus and its ligaments, and of the rectum; and are supposed to be looking from above down into the pelvic cavity, so as to see the fundus of the uterus presenting towards us in the axis of the superior strait. We have also a view of the position of the uterine ligaments, the bladder and



No. 3.

rectum. Thus viewed, it will be seen that the uterus and broad ligaments constitute a partition which divides this single cavity into two chambers; the larger or anterior one containing the bladder and the uterus, the posterior or smaller one containing the rectum. In No. 4, we have a diagram, taken from page 33 of Prof. Barnes's work, first edition, after Breisky, and is termed by Prof. B. "a longitudinal section of



No. 4.

the pelvis." It is also a vertical section like the one of Prof. H., made through the mesian line. In this diagram the utero-rectal interspace is very much smaller than in Prof. H.'s diagram: the angle made by the axes of the vagina and of the superior strait is much larger (about eighty-three degrees), while the bladder and uterus are represented as lying packed closely together. Breisky's diagram is after an actual dissection.

Now the viscera which mainly furnish the supporting pres-

sure of which I have spoken, are the small intestines, the transverse colon, the greater omentum and the bladder. The force of this pressure is guided and controlled by a series of planes, which are made up of various portions of the inner surface of the two cavities. They reflect it from one to the other, in such a manner that it finally presses backwards and upwards against the obliquely placed partition which the uterus and its outstretched broad ligaments make in the cavity of the pelvis. A pressure directed backwards and slightly upwards against this partition, or even transversely to it, keeping in mind the obliquity of its plane, will support the uterus, somewhat as a kite rides up against a transverse or slightly ascending current of air, or as a buoy floats in water.

The viscera referred to, with the exception of the bladder, are attached, as is well known, so as to be very movable; and their contents—being composed of solids, liquids, and gases—may be, in average specific gravity, estimated as being about that of water. The pressure, therefore, which they exert is a hydrostatic pressure, and is therefore amenable to the law of hydrostatics, that the pressure of liquids is transmitted equally in every direction. The intestines, serving as a tubular receiver of this fluid mass, lie packed away in a column in the anterior portion of the abdominal cavity, folded up in a series of coils one upon the other, readily gliding about over each other in every direction, in response to the slightest degree of muscular contraction or respiratory movement; while the bladder serves as a watery cushion or wedge-shaped base upon which the column rests, by which it is wedged backwards and upwards underneath the uterus.

The planes which serve to direct the viscera in this curvilinear direction from above downwards and backwards, are three in number, and are constituted as follows: The first one in the series is made up by the anterior surfaces of the ninth, tenth, eleventh and twelfth dorsal, the first, second and third lumbar vertebræ, and by the contiguous lateral surfaces of the abdominal cavity. The second one is made up of the lower, anterior and inner surfaces of the abdominal cavity,

and by the inner surfaces of the symphysis and the pubic bones. The third in the series will be constituted by the inner surfaces of the rami of the ischium, and by the anterior and upper surfaces of the perineum and the adjacent and upper surfaces of the vagina and rectum. These latter structures are supported by the os coccygis and lower portion of the sacrum, which give to them a concave surface looking backwards and upwards. This last plane constitutes mainly the floor of the pelvic cavity.

Considered as a whole, the abdomino-pelvic cavity is a cylindrical body, bent upon itself; so that a force, directed from the upper and posterior surface, which is convex, directs it forwards and downwards, so that it is received on the anterior and lower surface, which is concave, and which looks backwards, downwards and upwards, and along which direction the force must travel until it is finally arrested by the posterior wall, which is made up of the sacrum and coccyx.

Taking the planes separately, the first one enumerated in the series being a convex surface, projects the semi-fluid movable contents of the abdominal cavity forwards and downwards, the point of attachment of the mesentery and its fan-like expansion being such as to favor the canting forward of the weight and pressure of the viscera upon the second plane. This second plane, the lower anterior, and inner surface of the abdominal walls, receiving the pressure, in turn reflects it backwards in its downward course through the bladder and vagina upon the third, of which the anterior and upper surface of the perineum is the principal surface; whence it is reflected directly upwards and a little backwards against the uterus and its outstretched broad ligaments, which are wedged or buoyed upward in their position by hydrostatic pressure against the rectum and a moiety of small intestines, supported by the sacrum and coccyx.

The uterus in this position is not unlike the keystone of an inverted arch, the keystone being placed upside down; that is, the thick end of the stone uppermost. As the column of intestines presses down upon the dome-shaped roof of the

bladder, the uterus being pyriform in shape, and tethered in front by the vesico-uterine ligament, and moreover being held firmly in the axis of the superior strait by the combined action of the broad ligaments and the ligaments attached to the cervix in the rear as well as the front, against this pressure bearing down in front and underneath it, there is no tendency for it to retreat in any direction except upwards and forwards; whereas, if it were placed as a true keystone of an inverted arch, the thin edge of the wedge upwards, the pressure would tend to displace it backwards and downwards.

Such, then, is the theory of the natural support of the uterus, which I have made bold to offer in place of the various conflicting views entertained by gynecologists and by the profession at large.

With all due deference to gynecological authorities and for the general opinion of the whole profession, I can not accept such conflicting views as, from time to time, have been put forth; and I will now take the liberty to review and criticise them. An impartial review, I believe, will show that they are not in accordance with the laws of mechanics, and that the explanation of the problem of the natural support of the uterus, as generally received, is in a very unsatisfactory condition.

Prof. Hodge, at page 240 of his work on Female Diseases, maintains that "there can hardly be a doubt but that the proper position of the uterus is maintained chiefly by the ligaments." Among quite a number of *accessory* agents enumerated, he gives the greatest prominence to the pressure of the small intestines upon the uterus, as the most influential agent of this class in maintaining that organ in its proper position. The following, on page 247, is his explanation of the agency of this force:—"The mesentery, connecting the small intestines with the posterior part of the abdomen, admits of so much mobility of these intestines as to allow them to fall freely into the cavity of the pelvis, which they do whenever this cavity is not fully occupied. Hence, they are found in front and also behind the broad ligaments; much the larger

portion is usually found behind. . . . Hence, it clearly follows that the small intestines behind the uterus, when this organ is *in situ*, and the bladder not inordinately distended, act as an almost insuperable impediment to retroversion of the uterus. The natural obliquity of the womb is, therefore, maintained by the weight and pressure of the intestines."

At page 334, when explaining the *modus operandi* of his celebrated pessary, he more fully and completely illustrates the views he entertained as to the agency of this pressure. When properly introduced, the pessary performs, according to Prof. H., "the part of an *elevator*. It operates as a lever in elevating the fundus from its malposition against the sacrum to its normal position behind the bladder; that portion of the pessary which is posterior to the neck of the organ being the 'short arm,' while all anterior to the neck is the 'long arm,' and the 'fulcrum,' or support, is the posterior surface of the vagina. As the long arm or horn is depressed by the finger of the practitioner, the short arm rises and carries with it the body and fundus of the uterus.

"This elevation being accomplished, the pessary maintains the organ in this position. It acts as a *supporter*, for the *intestines now fall once more on the posterior surface of the uterus, and press this organ against the long arm of the lever, that is against the horns of the pessary; so that when the woman strains, the horns are depressed towards the rectum, and the bar of course rises behind the uterus. The condition of the patient is entirely changed; for, standing and walking, which before were painful and distressing from the pressure of the intestines on the anterior surface of the uterus, increasing the displacement, is now useful, as the pressure of the intestines is transferred to the posterior portion of the organ impelling the fundus forwards towards the pubis.*"

I have taken the liberty of italicizing the foregoing paragraph, with the exception of the word "supporter."

Prof. Barnes, page 33, (first American edition), of his work on Female Diseases, claims "that the uterus is held, slung or suspended by different folds of the peritoneum, and by mus-

cular bundles principally situated in these folds;" and also that "being closely connected with the bladder, fallopian tubes, rectum and vagina, *these structures concur* in maintaining the position of the uterus." (The italics are again mine.) Yet, in the concluding sentence of this paragraph, he adds these strange and, as it appears to your committee, inconsistent statements, as follows:—"The broad ligaments do not prevent the uterus from inclining backwards or forwards; they are never fully on the stretch, and allow the uterus to be sensibly lowered without being dragged upon, and can only resist lateral deviations." Of the round ligaments, he says, "they are never on the stretch, and can not resist displacement of the uterus." Of the utero-vesical ligaments he remarks, at page 36, "the experiments of Malgaigne seem to demonstrate that these ligaments form the principle obstacle to the falling of the womb towards the vulva."

Prof. Thomas, page 320, third edition, *Diseases of Females*, holds to the view that "the most demonstrable and important of these means is unquestionably the vagina." Next in importance, in his estimation, are "the surrounding investments of areolar tissue, and the utero sacral ligaments;" and the experiments of Dr. Henry Savage are cited as sustaining his views.

With all due deference to these illustrious and learned authorities, I beg leave to dissent from their views, and to offer a few objections to the acceptance of their conflicting theories.

And, first, of the ligaments. A ligament is a very flexible structure, the principal function of which is to bind together various parts, as the bony members of a joint, or to support in their proper places various of the viscera in the cavities of the body. In the latter instance they are called *suspensory* ligaments; that is to say, they suspend a weight. To accomplish the suspension of the weight of an abdominal or pelvic viscus, however, they must find some point of attachment in the abdominal cavity, *above* the viscus to be suspended; and must act in a direction coincident to some extent with the

line which marks the axis of the body to be suspended. The falciform ligament of the liver, and the lesser omentum, are true suspensory ligaments to the liver and stomach; the mesentery to the jejunum and ileum, and the meso-colon to the transverse colon; but in no such sense can the six, or possibly eight, ligaments which proceed from various points of origin on the uterus, and pass off transversely to their points of attachment, be said to act as suspensory ligaments. The lateral ligaments do not find points of attachment on either side of the pelvis at points any higher than the fundus of the uterus: the round ligaments, when the person is in the erect position, find points of attachment which are *lower* than their points of origin on the surface of the uterus; while the vesico-uterine, and the recto-uterine, attach the neck of the uterus—the one to the bladder and the other to the rectum—so that the neck can not vibrate backwards towards the sacrum, or forwards to the symphysis, only within certain bounds. None of them are in a position to oppose displacements downwards, the first step in all displacements of the uterus. If the lateral ligaments were constructed of some rigid material like bone, we could then see how it might sustain a weight attached transversely to its axis. They are, however, simply folds of peritoneum, inclosing within their duplicatures bundles of muscular fibre, and are readily unfolded in pregnancy until they disappear upon the sides of the uterus, while the muscular fibres have become enormously elongated. When we consider how a very weak force, constantly acting, will readily overcome a muscular resistance many times greater, we can not reasonably expect any support whatever from any of the ligaments, except as *accessory agents*: especially is this true in view of their transverse attachment.

It is claimed, however, that Dr. Savage's experiments have settled this question of the support obtained from the ligaments. They do prove something, but it is just the opposite conclusion from the one claimed, as will be readily seen on a candid examination of the various steps in the experiment which he made. With a strong vulsellum hook he forcibly

dragged the uterus *downwards* as he claims, but as the account which he gives of it shows, it was also displaced at the same time *forwards*. When he had made the uterus descend one and a half inches, he found that the utero sacral ligaments had been put well on the stretch, and that the whole body of it was now sunken *forwards* also, displacing to some extent the bladder so as to be embraced partially by that organ. Dividing the utero-sacral ligaments, "the uterus yielded rather suddenly another inch." And finally, when the uterus was dragged half out of the vulva, *then, and only then*, was it found that the broad ligaments were in the way of its further descent. These being divided, complete procidentia was finally effected.

The only logical conclusion from all of which is, that these so-called supports of the uterus never come into requisition as *primary* supporting forces, as long as the uterus remains in its *normal* situation; and not until it is displaced downwards and forwards, at least an inch and a half in direct descent, is any decided obstruction on the part of the ligaments met with, most of which is developed by its *forward* displacement. Manifestly, then, the combined result of the action of these forces can not be *suspension* of the uterus, but the *poising* of that organ on its proper axis, and the supporting power must be sought for elsewhere. The ligaments, like the guy-ropes of a suspended weight, or the stay chains of a suspension bridge, merely prevent undue lateral deviations.

We will, in the next place, consider the adaptation of the vagina as a means of support. "The vagina," to quote Prof. Hodge, "is a soft, flexible, and distensible canal of a flattened form, having no firm attachments excepting at its lower extremity. Experience also shows that it accommodates itself to the ever varying position of the cervix and body of the uterus, connected with its upper or sacral extremity. It, therefore, is lengthened out in pregnancy; it is shortened or curved in the various displacements of the organ; sometimes it even protrudes at the vulva, and descends with the uterus between the limbs." It should be remembered that in addi-

tion to this, the axis of the vagina forms an angle of nearly ninety degrees with the axis of the superior strait, which is also the axis of the uterus; it is therefore not within the line of support, but is placed transversely to it, at about a right angle. It is impossible, therefore, in view of its construction or position, to consider the vagina as one of the supports of the uterus.

Finally, we will consider the theory of Prof. Hodge, of the maintenance of the uterus in its proper position by the pressure of the intestines, as an accessory agent.

On pages 239 and 247 of the work already referred to, he writes as follows:—"The small intestines descend not merely from gravity, but are pressed firmly into the unoccupied portions of the pelvis by the contraction of the muscular walls of the abdomen in every movement of the individual. . . . The uterus is subjected to great pressure from the weight of the small intestines, which is greatly increased by feculent accumulations in the large intestines, especially in the sigmoid flexure of the colon, by tympanitic distensions, and especially by the contraction of the muscular parietes of the abdomen, in all of the efforts of walking, running, standing, straining in defecation, vomiting, sneezing, coughing, lifting weights, etc."

From these statements it is evident that Prof. Hodge regards the weight of the superincumbent viscera more as a displacing than a supporting force; for, in speaking of the weight of the intestines upon the uterus, he concludes the paragraph of one of the foregoing quotations we have made from his book, as follows:—"It is no wonder, therefore, that we hear of displacements of the uterus; but rather that the natural position of the womb, can, in any individual, be maintained against such great and constant weight and pressure." Further on, at page 291, in speaking of the difficulties met with in all artificial or mechanical arrangements for maintaining the uterus in its natural position, he says:—"There is always present the opposition from the weight of the superincumbent viscera and the great pressure from the abdominal

parietes, under the ever-varying positions and motions to which the body is subjected."

As an objection to this position of Prof. Hodge, that there is a constant force at work tending to displace the uterus which is derived from the weight and pressure of the intestines, I think it proceeds from the statement that much the larger portion of the small intestines are usually found *behind*, and bearing down upon the fundus and posterior surface of the uterus. This must be an anatomical error. In the cadaver, lying upon the dissecting-table, with the abdominal cavity freely opened, this might be true, and it is not unlikely that Prof. Hodge makes his statement from some such investigation. But in the living woman, especially when walking erect with head and shoulders poised backwards, it is impossible to understand how any very large quantity of small intestine can find its way into the posterior division of the pelvic cavity,—and indeed in any position, so completely occupied does the whole pelvic cavity seem to be by the bladder, uterus and its appendages, and by the rectum; and especially by the over-arching projection of the sacral promontory, and its oblique position in the pelvic cavity, is the uterus protected from an appreciable weight of intestines resting upon its fundus or posterior surface. Besides, we must bear in mind that the point of attachment of the mesentery is such that it must direct the weight of all of the very movable abdominal viscera forwards in a line of descent, which overarches the uterus, and deposits the hydrostatic pressure of the viscera and their pultaceous, watery and gaseous contents, upon the dome of the bladder, the concave surface of the abdominal wall below and in front having reflected a portion of the burden backwards with that which directly falls upon the bladder.

Particularly and most forcibly is the theory which I advocate necessary to understand the principle upon which the lever pessary of Prof. Hodge is constructed; and no other view of the natural supports of the uterus can explain the *modus operandi* of this mechanical appliance. Its illustrious inventor has rightly called it the *lever pessary*, and in no ex-

travagant terms does he enumerate the brilliant results which it can certainly accomplish when rightly applied. When adjusted for any form of displacement, but especially in prolapsus and retroversion, the long arm must rest underneath the bladder, the fulcrum—which is a *point*, and not a surface, and is placed just where the two curves of the long and short arms meet—must rest just opposite the cervical canal on either side. Thus arranged, the short arm and bar of the instrument will be found behind the cervix and pressing upwards between the posterior surface of the displaced uterus and the rectum. Just here, with much deference to the great and justly honored name of Prof. Hodge, we feel called upon to question the correctness and accuracy of his views as to the *modus operandi* of his pessary. His *point* for the “fulcrum” of the lever is the posterior surface of the vagina, and the resistance to be overcome he makes the propelling power! For most strangely, as it seems to your committee, he derives the force which depresses the long arm of the lever backwards towards the rectum from a pressure on the fundus and body of the uterus, this organ being pressed upon by the small intestines, as he claims, from behind, where as he states the larger portion of them are to be found. Even if this statement of the position of the small intestines were true, he is greatly in error; for if we can understand how a man, standing on the extremity of the short arm of a lever, can, by seizing hold of the long arm, elevate himself, the explanation given by Prof. Hodge of the lever movement of his pessary may be comprehended. Now, practical experience with the use of the lever pessary has convinced me that the long arm is in reality forced down towards the rectum, causing the short arm and bar to ride upwards and backwards behind the uterus, carrying it obliquely forwards and upwards in the direction of the axis of the superior strait. Such a force does exist, and it is one which is capable, to some extent, of readjusting the lever as the resistance is overcome, constantly keeping the pessary retreating backwards and upwards as the displaced organ rises into place. Now, inasmuch as the long

arm of the lever, when the pessary is rightly adjusted, is placed immediately underneath this column of hydrostatic pressure from the bladder and intestines, it would seem to be conclusively demonstrated that the force which is applied to the lever can be derived from no other source whatever, except it be from the downward pressure of this large and long column of fluid-like mass contained in the viscera, in the anterior portions of the abdomino-pelvic cavity.

Furthermore, the greater frequency of displacements, and the peculiar character which they present in women who have borne children, tend to prove the proposition I have announced. In such cases, displacements are always accompanied with more or less pendulousness of the lower part of the abdomen, by which means it happens that the contents of the cavity, instead of being poised over and resting upon the bladder, fall too far forward to furnish the requisite support for the uterus in whose walls are to be found the products of inflammation, or engorgement, or in a condition of subinvolution.

In those, on the contrary, who have never borne children, displacements are comparatively infrequent, and occur from such causes only as severe falls upon the nates, violent coughing, epileptic convulsions, etc. In these instances, the abdominal walls preserving their natural contractility and contour, a reduction of the displacement effects, with a short rest in the horizontal position, a complete cure—the natural support of the uterus (the normal contour and contractility of the abdominal muscles) having never been disturbed. Recovery proceeds in such a case, just as it does in a recent dislocation of a joint which has been promptly reduced.

Finally, it would seem that it needed no labored argument to show, that the evacuation of the pregnant uterus at term of its contents, would leave the fleshy walls of the cavity of the abdomen and the floor of the pelvis in such an extreme degree of over stretching and distension, that the bearings of the various planes of both cavities to each other, and upon the contained viscera, would be found greatly altered, and the relation of them as a whole to the uterus much disturbed.

I maintain, then, that the weight of the movable, fluid-like contents of the abdominal cavity does not, as Prof. Hodge argues, tend to disturb the equilibrium of the organs of the pelvic cavity; but that by reason of the obliquity to each other of the axes of the two cavities, the weight of the intestines, and the pressure of the abdominal walls upon them, are converted by the peculiar mechanical arrangement which has been described into a conservative supporting influence, which is the only support of the uterus capable of demonstration.

If the theory which I have advanced as to the natural support of the uterus, and the etiology of displacements, be correct, the principles upon which the treatment of all displacements of the uterus should be based are easily deduced.

And, first, as to their prophylaxis. Immediately after parturition, to guard against the occurrence of these troubles, a neatly-fitting abdominal bandage or corset—not the old conventional obstetric binder—should be accurately fitted to the patient, and worn for months after getting up from her lying-in bed. As the abdomen subsides, the bandage should be readjusted from time to time. It should be so fitted as to give equable and uniform support to the over-stretched abdominal muscles, and also at the same time restore as nearly as possible the natural contour and symmetry of the abdomen. The pardonable pride which all women feel in preserving their forms, will create a ready coöperation upon their part in the adjustment and wearing of a suitable appliance, and, under the instruction of their physician, many of them have the requisite skill to construct them. But a skillful instrument maker, when his aid can be secured, will make the most efficient and comfortably fitting supporters. Besides restoring the shape, and relieving the overburdened muscles of a weight which interferes with the recovery of their tonicity, the utero abdominal supporter acts as an artificial fascia to the muscles it compresses, and thus gives tone and efficiency to their contractile efforts.

The antiquity and universality of the use of some form of bandage under a variety of names, not only under the guidance

and direction of physicians themselves, but also by women, who have ascertained the need of such support by instinctively elevating and pressing in with their hands their pendulous and bulging abdomens from below upwards, has demonstrated that the beneficial results of its use are too well established to admit of doubt. It, however, requires nice and skillful adjustment. In the instrument stores are to be found a great variety, in both material and form. As a test of the proper adaptation of any one which may be selected, I would suggest the following experiment: Let the patient stand against a wall, firmly supporting herself against it. The physician now kneeling, or seated on a low stool in front of her, passes his hands up underneath the clothing, and adjusts them so that the ulnar side of the hand occupies each groin, the palms and extended fingers embracing the lower portion of the abdomen, and taking care to approximate his thumbs together firmly side by side just at the mesian line and above the symphysis, he gently elevates and presses backwards the lower part of the abdomen, until he finds the position of the walls which gives the greatest relief. He should then apply his apparatus with the end in view of making it elevate and compress in the same manner. A perineal strap and pad may be necessary to complete the apparatus.

In moderate forms of displacements, the bandage or utero-abdominal supporter, as it is often called, is sufficient of itself in many cases to afford complete relief; but in marked anteversion, prolapsus, and retroversion, the combination of the bandage with Thomas's or Hewitt's anteversion and Hodge's lever pessaries, will be found of the greatest value. These pessaries not only serve to transmit the pressure of the intestines, and apply it properly, but they splint and brace up, as it were, the weakened pelvic floor which, like the abdomen, is bulged out from its proper place. I doubt not but that with the aid of a skillful instrument-maker, a nicely constructed curved perineal support of *hard rubber*, which would be movable, could be adjusted to the abdominal bandage and made to conform to the pelvic floor, and to the inner sides of the buttocks and thighs, so that it could be

worn without chafing, and at the same time serve to elevate the downward bulged contour of the floor of the pelvis,—fitting and pressing upward under the pelvic cavity as the arm piece of a crutch presses into the axilla. Of course, in every application of an utero-abdominal supporter, it is to be understood that as complete a replacement has been made as the circumstances of the case will admit of.

The field of my observation, being in general practice in the country, is too limited to be of any value in a tabulated form. Quite a number of cases, however, directly and indirectly, have come under my observation, where the bandage has, alone and combined with pessaries, given most marked relief in the treatment of displacements. In one instance, where pessaries in the hands of accomplished gynecologists completely failed, an abdominal supporter somewhat of the form of the one known as the "London" supporter, gave permanent and complete relief.

Of those who condemn utero-abdominal supporters, we believe the most of them do so, as Prof. Hodge has done in his work on Female Diseases, merely on theoretical grounds. While admitting their practical value, he condemns them because he can not accept the explanation of their *modus operandi* by those who advocate their use. The explanation, on their part, was doubtless erroneous. These advocates of the bandage claimed that it relieved displacements by so forcibly constricting the abdominal cavity as to intercept the pressure and cut it off from descending to the pelvic cavity; or, in other words, it prevented transmission of the pressure below the line embraced by the bandage. The error in the theory of its use is, however, of no avail against the practice.

Trusting that the theory advanced may be tested by the profession, I leave it in their hands for a trial.

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DANVILLE, KY.

A CASE OF ARTIFICIAL ABORTION FOR RELIEF OF
UNCONTROLLABLE NAUSEA AND VOMITING,
WITH REMARKS.

BY M. H. JORDAN, M. D.

Mrs. C. H. S., aged twenty-four years, with a good family history, enjoyed excellent health until three or four years ago, when she received a fall by a chair being jerked from under her. Since which time she has suffered from a displacement of the uterus, complicated with a cystitis and reflex irritation about the rectum. This lady was treated for these troubles several years ago by Dr. E. W. Jenks, of Chicago, but removed to this state before a complete cure was established. The subject of this paper, although suffering from uterine, cystic and rectal troubles, married about eight months ago, and in three or four months became pregnant.

On June 23, 1879, I was telegraphed to visit Mrs. S. at her home in Shelby county, Alabama, and learned that she had been confined to her bed for five weeks, with a distressing and uncontrollable nausea and vomiting. She was much emaciated, very nervous, with a quick pulse, some fever, and retained comparatively nothing on the stomach, and had but little quiet and undisturbed sleep either day or night. There was great soreness over the stomach and abdomen, and the act of vomiting was frequent and distressing.

I tried all of the remedies that are usually given in such cases with negative results; and in order to secure a night's rest I administered one-fourth of a grain of morphia hypodermically, but it seemed to increase the nausea and vomiting, and produced such alarming nervous symptoms that I was deterred from again attempting its use. Among a large number of other drugs, I gave large doses of the bromide of potassium and hydrate of chloral by enema, with no other result than to increase the local irritation already existing in

the rectum, and causing additional pain and constitutional disturbance.

Being baffled and disappointed thus far in everything, I concluded to try a remedy that I believe was first suggested by Dr. J. Marion Sims—that of applying nitrate of silver to the uterus. Accordingly a Sims's speculum was introduced, and a thorough application made to a reddened and inflamed os and cervix uteri; but this remedy produced no other effect than a slight discharge from the vagina for several days.

Seeing that the patient's condition was growing more critical and her strength failing day by day, I concluded that the time had certainly arrived to attempt an abortion. So accordingly I passed a sound to the fundus of the uterus. I felt sure that this would end my trouble with this case, for I fully expected to receive intelligence in a few days, either from the husband or attending physician, that the lady had miscarried, but instead was summoned to visit her again, as the treatment had produced no effect.

At this visit I found the patient still more exhausted from loss of sleep and rest, and retained scarcely any food or drink, and it was evident that without relief she certainly could not long survive; so I advised her husband to convey her to the train (on a mattress), and thence to Birmingham, where I could see her often, and give the necessary attention.

On the following morning I called Drs. J. W. Sears and W. P. Taylor in consultation, and we found the patient in the following condition, viz.: Distressing nausea and vomiting, a feeble pulse (from one hundred and twenty to one hundred and forty beats per minute), a hot dry skin, a dry coated tongue, parched lips, and presenting the appearance very much of a patient in the fourth week of typhoid fever. Drs. Sears and Taylor agreed with me that abortion was certainly justifiable, and should be brought on as soon as possible; consequently I again passed the sound into the uterus, packed the vagina with a cotton tampon, and gave large doses of ergot hypodermically, but even this medication and local

irritation proved insufficient to arouse the uterus to contraction.

As time was a great consideration in this case, and fearing the evils of delay, on the next day I passed a small sea-tangle tent well into the uterus, and tamponed the vagina as before, so as to hold the tent *in situ*, and let it remain fifteen hours; but this produced no other result than slight dilatation of the os uteri.

Seeing that unless relieved this lady could not live many days, as she had become so weak that she could not turn herself in bed, we resolved upon active interference to empty the uterus of its contents, and lessen the tension on the uterine fibers. In obedience to this resolution, I introduced a large sponge tent into the uterus beyond the os internum uteri, and secured it in place as before with a cotton tampon.

At the expiration of six hours I introduced a Sims's speculum, and after removing the cotton and sponge tent, which had done its work well and fully dilated the cervical canal, I hooked a uterine tenaculum into the anterior lip of the cervix, and slowly but steadily drew it down near the vulva, and within easy reach of my fingers. I then withdrew the speculum (the tenaculum remaining), and had the patient turned on her back, her hips drawn well over the edge of the bed, her legs flexed and thighs held at right angles with the body, so as to secure the greatest degree of relaxation possible to the perineum and abdominal muscles, and introducing two fingers into the cavity of the uterus removed a fetus (a miniature baby) at about the fourteenth week of utero-gestation. Then with my index finger I made the complete circuit of the uterine cavity, and removed the little placenta; and wishing to sustain all the strength the patient had, I injected about a pint of hot water into the uterus to secure a good contraction and prevent hemorrhage.

Dr. Sears kindly gave the patient a little chloroform during the operation, and she rallied well and experienced but little shock. In several hours I called and found the patient suffer-

ing considerably from after-pains; but after removing a small clot from the cervical canal, I washed out the vagina with tepid carbolized water, and gave fifteen minims of the fluid extract of hyoscyamus hypodermically (as she could not take morphia), which secured her a good night's rest—the only one that she had received for seven or eight weary weeks.

After the operation it was indeed wonderful what a transformation there was in this patient's condition; for she never became sick at the stomach nor vomited a single time, but immediately began to retain milk and absorb all that was given her. I used no other treatment save an antiseptic vaginal wash; and she steadily improved, her fever subsided, her tongue became moist and began to clean off, appetite returned, and at the end of two weeks was able to be carried home with her mother to Chattanooga, Tennessee.

Remarks.—In any case of abortion where the decidua has not been expelled, the obstetrician has not fully discharged his duty until he has by bold and prompt measures removed it by manual extraction. This operation does not require any great amount of technical skill, and its immediate results are in the highest degree satisfactory. It can be accomplished by placing the patient crosswise in bed, her hips near the edge, her legs flexed and thighs held at right angles to the body; and with the left hand over the symphysis pubis press the uterus well down into the cavity of the pelvis, and pass the index finger of the right hand through the cervix, and by making the complete circuit of the uterine cavity the decidua can be removed without much difficulty.

In many ordinary cases of abortion the placenta is left *in utero*, to be thrown off by nature as best she may; and doubtless the large number of helpless, broken-down women, with long histories of repeated hemorrhages, fetid discharges, and local inflammations—either a subinvolution, or uterine or cervical catarrh—who present themselves almost daily to their family physician, or finally seek relief of some specialist in

the larger cities, are in as many instances due to bad management in abortion as in labor at full term.

I do not believe that any woman is safe in abortion, nor should the obstetrician leave his patient until the little placenta has been removed in the manner just detailed; for in my limited gynecological practice I have seen cases of serious uterine trouble caused by a small tuft of the placenta left *in utero* after an abortion, and which was relieved after its removal by Thomas's curette, combined with constitutional treatment. For the extraction of the placenta the index finger is preferable to the ovum forceps, for it is safer, simpler, and there is no danger of producing local injury to the endometrium.

In conclusion, the following summary of views are respectfully offered in connection with this case:

1. We could hardly conceive of a more unfavorable case for operative interference than the one just detailed, and the result tends to justify so bold a procedure in such cases.
2. If this lady had not have aborted she certainly would have died.
3. The vital powers were so completely overwhelmed by the constitutional disturbance of nausea and vomiting, that nature either refused or was unable to arouse sufficient uterine energy to expel its contents.
4. In all cases where nature fails to bring about abortion, and the patient's life is in jeopardy, if the obstetrician does not empty the uterus of its contents by a bold and prompt procedure, he has not given his patient the benefit of all the resources of his vast art.

I hereby return thanks to Drs. Taylor and Sears, for valuable counsel and assistance in the management of this case.

BIRMINGHAM, ALA.

HOW TO PREVENT MAMMARY ABSCESS.

BY S. S. BOYD.

In the September number of the American Practitioner, I find a very excellent paper, "A Simple Method of Preventing Mammary Abscess," copied from the Canada Medical and Surgical Journal.*

For years past, when in my practice a mammary abscess is threatened, I have always applied a bandage to the breast with the most satisfactory results, never failing to prevent suppuration if resorted to in time. Even after the breast has suppurated at one point, if the bandage is properly applied the extension of inflammation to other parts of the breast will be prevented; which was not the case when, under the old *régime*, I used all the poultices, plasters and liniments, which I and all the old women of the vicinity could suggest.

The bandage is applied as follows: First, take a roller of sufficient length to pass around the waist of the patient just below the breasts. Then take a piece of strong muslin about eight inches square; cut a circular hole in the center of it, large enough to pass over the breast tightly; sew one edge of this to an edge of the band. Now raise the breast and gently draw the eight inch piece over it, so that the breast will protrude through the circular opening. Fasten the bandage as tightly around the waist as can be comfortably borne. From each upper corner of the square piece fasten a band and pass them over the shoulders, and secure tightly to the bandage which passes around the waist.

We now have a foundation for the superstructure, which we build as follows: Take a soft roller, one and a half inches wide, and lifting the breast pass it around the breast two or three times at the base as tightly as can be tolerated by the patient. Then cut strips from the same roller about eight inches long, and fasten one end of one of the strips to the

* *Vide American Practitioner*, p. 179, September, 1879.

inner edge of the cloth through which the breast protrudes; fasten the other end of the strip to the opposite side of the ring, passing it over the breast but avoiding the nipple. Apply other strips in like manner until the breast, except the nipple, is completely covered; apply the strips as tightly as can be borne by the patient. It will astonish the uninitiated how much pressure an inflamed breast will bear when thus gradually applied. The same plan is resorted to when not called until suppuration is established, except that an opening in the bandaging is left at the point of exit of pus. When the bandages become loose, as they rapidly do, they should be tightened.

Not claiming that the above plan of treating mammary abscess is as neat as that given by Dr. Shepherd, I do claim that the bandaging more thoroughly fills what I take to be the indications in such cases, namely, to more effectually cut off the excessive supply of blood that feeds the inflammation, which once established often destroys the function of the breast, and brings almost intolerable suffering to the patient. While I admit Dr. Shepherd's plan of treatment acts, as he says, by "exercising even pressure and giving support to it," yet I believe the facilities for renewing the pressure, as afforded by the foregoing suggestions, will be found essential to success in many cases.

Again, if we teach the student or young practitioner of medicine that by bandaging the breast we cure mammary abscess, he at once discovers that congestion and even inflammation can be overcome by pressure continuously applied; and he will not have to be taught that bandaging is "the sovereignest thing on earth" for indolent ulcer, a sprain, or synovitis, and most other forms of inflammation where a bandage can be used or pressure applied. In short, we teach a *principle* which is adapted to a wide range of diseases, and not a mere *fact* which only applies to a single case.

DUBLIN, IND.

FOREIGN CORRESPONDENCE—OUR LONDON LETTER.

LONDON, October 15, 1879.

MY DEAR YANDELL: The month comes round rather rapidly, I find; but we are told by good authority that as life progresses the time flies swifter, though I have some doubt as to whether this holds out into nonogenarian existence. The medical session has commenced, and at the different schools, or at least most of them, the opening addresses have been full of good advice as to study and the best use of their time for the new students. The entries have been very large this year. It is thought that this is due to the poor prospects in commerce and in agriculture, owing to the existing depression in both; and many young men, who would otherwise have gone to a trade or studied farming, have determined to take their chance in the ranks of medicine. The more necessity, then, for these remarks and advice.

An interesting discussion took place at the Cork meeting on the subject of Hemorrhage from the Genital Organs during Pregnancy and Parturition. It was opened by Dr. A. V. Macan, of Dublin. He commenced with the subject of menstruation during pregnancy: holding the view that this term is misapplied as to the bleedings which occur during pregnancy. He holds Bischoff's theory of the dependence of menstruation upon ovulation; a view not held by many rising authorities. He then discussed the subject of threatened abortion, when the life of the mother was in question. This involved a diagnosis as to whether the fetus were alive or not in many cases. If it were certain that the fetus was dead, then there is the simple uncomplicated question of the mother's life. But in some cases the mother would run some risk to give her child every possible chance of existence. Sometimes the ovum survives the most numerous and varied perils. Some authorities hold the view that the discharge of decolorized blood-clots was evidence of the death of the fetus; but recently he had met with a case where such symptom was present, and notwithstanding the fetal heart was heard a fortnight afterwards. He drew attention to the great improvements which had lately been made in this department by the use of Thomas's blunt wire curette, and the scoops of Simon, of Heidel-

berg, first introduced for the removal of cancer. The tedious and painful operation of dilating the cervix might often be avoided.

He then referred to the treatment of placenta previa. He stated there could never be unanimity of opinion on the subject till the knowledge was more general as to the actual changes in the cervix which are induced by pregnancy. The cervix is not taken up gradually into the body of the uterus in the later months of pregnancy, as has been supposed. The manner in which the cervix becomes obliterated is very different in the primipara and in the multipara. The placenta is never found attached to the cervix except in some rare cases when it leads to early abortion; and, therefore, it was incorrect to speak of the placenta being detached from the cervix as this becomes retracted. Moreover, instead of the interior of the cervix becoming smaller during the dilatation of the os, the fact was it became immensely distended in every direction. The placenta, when partially previa, was inserted into the lower zone of the body of the uterus. Such being the case he contended that Dr. Barnes's plan of separating the placenta from its attachments, as far as the fingers could reach, was hardly a right one. He then explained how rupture of the membranes was often followed by cessation of hemorrhage. Again, when the pain comes on, the circulation in the placenta is largely arrested; consequently ergot causes such tonic contraction, that the child may be asphyxiated. If the presentation were complete it was only necessary to detach the placenta on one or other side, to tear the membranes freely away from its edges, and then the case became one of partial placenta previa. Where this could not be done, it was necessary to plug until the time came when it could be carried out. As to the treatment of post partum hemorrhage, the newest points in treatment were the subcutaneous injection of ergot, and the use of hot water injections to throw the uterus into tetanic spasm. Mere warm water will not do this; it must be from 110° to 120° Fahrenheit, to be useful.

Dr. T. More Madden followed. He said that if during labor flooding was anticipated, he recommended the following measures: The rupture of the membranes in the first stage; the use of stimulating enemata of a strong infusion of ergot, or the hypodermic injection of ergotine, in the second stage; and a firm, unremitting manual pressure over the fundus uteri, from the time the child's

head escaped from the vulva until the completion of the third stage, (which should never be hastened by traction on the cord), and the permanent contraction of the uterus was secured.

Then Dr. Walter, of the Manchester and Salford Lying-in Hospital, gave his experience of the hot water injection treatment of post partum hemorrhage. He said it had the advantage of being generally accessible, and not being disagreeable to the patient; but the contraction so induced was apt to be followed by subsequent relaxation of the uterus.

Dr. Lombe Atthill then criticised the different measures for the arrest of post partum hemorrhage. Ergot, he said, was most unreliable, and took time to act; so that even when injected subcutaneously its action was too long delayed to be useful. Cold was, perhaps, the most efficient of all agents, if used in the proper cases and at the right time, *i. e.*, when the patient was warm and reaction consequently followed. If its use was prolonged, or the patient were cold or exhausted, it was worse than useless. It was at this stage that hot water came in with advantage, not to supersede the use of cold. He thought Dr. Walter had used water at too high a temperature. Hot water would not replace the use of perchloride of iron, but it would at times render resort to it unnecessary. Perchloride of iron was in some cases absolutely demanded, and it was the most certain means of checking post partum hemorrhage.

Dr. Malins, of Birmingham, said two conditions benefited post partum hemorrhage, *viz.*, sickness and fainting. To produce sickness artificially was an unsatisfactory method of treatment. As regards fainting, he had never known a patient die who had fainted; it alarmed the bystanders, but it was a wise provision of nature to arrest the bleeding by lessening the force of the circulation, and promoting the formation of clots in the uterine sinuses. His own plan in so-called "flooders," was always to insist upon some preliminary treatment of the general health; at the time of delivery never to take the hand off the uterus; to give a dose of ergot as soon as the head pressed on the perineum; afterwards to inject ergotine subcutaneously by a long needle into the buttock. If these measures failed, he introduced a sponge saturated with a solution of perchloride of iron, exerting pressure externally.

In the Psychological Section, an interesting paper was read "On the Prevention of Insanity," by Dr. Rabagliati, of Bradford, who

spoke of the deplorable condition of Yorkshire, where one in every twenty-five or thirty was a pauper; and that in that county alone there were no less than two thousand nine hundred pauper lunatics in the county asylums, besides those in the workhouses. He proposed to take somewhat summary measures to meet such an appalling state of matters. He held that the rate-payers would be quite justified in insisting upon a forcible limitation of such a state of matters, and suggested that in the present ignorant mass of society marriage should be prohibited between persons who had ever been insane, and at any period of adult life been chargeable to the rates. His own opinion, based on a careful examination of facts—and Dr. Rabagliati is a man of no mean powers—was that insanity was only one group of a large class of closely allied diseases, such as scrofula, consumption, cancer, and perhaps syphilis. He thought that though there was no forcible interference as yet with the marriages of persons so affected, still there was already a very strong feeling against them. He thought much might be done by great attention to the physical development of children inheriting any taint. "He thought that with our over-peopled country, the number of the children of a family should average three, who could then be properly cared for; but were the present high death-rate to continue, then the average number should be five or six. He had heard it objected that such a course would only be followed by the prudent and thoughtful, who would then soon be swamped by the idle and the profligate still multiplying without check; but this argument overlooked the lessons of history."

From a somewhat extensive personal acquaintance with Yorkshire, I should feel inclined to say that in no county in England is there less likelihood of the Doctor's suggestions being entertained for a moment than in Yorkshire. That county is noted for the fertility of its women: in the agricultural districts families of seventeen and eighteen are quite common; while in the towns the families are smaller, but that is due to a high mortality, not to any decrease in the number of conceptions. Yorkshiremen, too, notoriously disregard any necessity for the marriage tie in their amours; holding a promise to marry, if any untoward result followed, as quite a sufficient guarantee to the compliant female. The necessity, too, for children to attend to certain parts of the machinery of mills, encourage him to test the fertility of his prospective spouse, before

entering upon any matrimonial contract. So that, on the whole, Dr. Rabagliati has chosen a county where his views are least likely to meet with acceptance.

Dr. Mould, of Cheadle, near Manchester, said that people married from other and more emotional considerations, and not after careful inquiry and due consideration; "and he felt assured that it was most injudicious and inexpedient for scientific men to interfere with the relations betwixt the sexes, and especially the regulation of the number of children." He quite agreed with the view that the cultivation of healthy growth in children would do much to reduce the proportion of insanity.

Dr. Ashe, of Dundrum, thought that a better acquaintance among general practitioners with the causes and oncome of insanity would lead to improvement, "so that the earlier stages might be brought under a sound and rational system of treatment."

Dr. Bodington, of Kings-Winford, thought further education of the ordinary medical man very desirable; and held the forcing plan of teaching at present in vogue generally to be very injurious.

Dr. Ringrose Atkins, of Waterford, held that in consequence of the want of familiarity with insanity, the family medical attendant was disabled from any proper consideration of the intricate factors which worked in the production of the cerebro-mental disorder; while, on the other hand, the unthinking and often willful concealment of all important facts and information, on the part of the friends of insane persons, or persons becoming insane, added greatly to the difficulties to be encountered. He also condemned the forcing plan of present education.

From this discussion, it will be seen how strong is the tendency for a discussion to wander from its proper subject. The forcing education of children in higher schools has little to do with the pauper lunatics of Yorkshire; and so far as the discussion is concerned, the increase of lunacy in Yorkshire is likely to go on unaffected thereby. The large proportion of insanity in that county is due, in a great part, to the monotonous occupation of many persons who tend a spindle for instance; and who, when their work is over, take to any form of excitement which offers itself. With all due respect to Dr. Rabagliati, I do not think that any limitation of their families is likely to attract the attention or captivate the class of whom he specially spoke, further and beyond the general fact

that such limitation is being largely considered by young wives under five and twenty. That the younger women of the present generation, in all classes of life, are entertaining the subject of limitation of their families, is a fact about which there can be no mistake; and that in this matter they are profoundly different from the women even of the generation immediately preceding their own, is equally certain.

In relation to the subject of superfluous infants, permit me to conclude with a remarkable letter. Sometime ago, the mortality of an orphanage in Lambeth attracted much public attention, and the sanitary authority directed its medical officer—Mr. Bernard Holt—to report thereupon. He wrote:

“I have this day (January 18th) inspected the convent in Carlisle Place, more particularly respecting the infant mortality in that institution. Generally the premises are thoroughly clean, well ventilated and capacious, and the children above two years of age present an appearance of perfect health. They are evidently well cared for, and the elasticity of their spirits shows that they are very kindly treated. The nursery is a sufficiently large room for the number of occupants, and gives to each infant more than eight hundred cubic feet of air. The ventilation is good; but the room contains a stove too large for it, and I have therefore requested that if infants are continued to be received, they may be placed in the adjoining room. The infants receive every care from the Sisters, who are most careful to do everything to preserve life; but with all their care it will be quite impossible to reduce the mortality without each child is provided with a wet nurse, and even then the mortality will be great in consequence of the impoverished condition of the infants at the time of their admission. In my opinion, the whole question rests upon the point whether they should admit infants until they are in position to provide them with natural nutriment.”

I know, Yandell, that you like and admire Holt, but can you tell me what he means?

Reviews.

Transactions of the Indiana State Medical Society for 1879. Twenty-Ninth Annual Session. Indianapolis, 1879.

The session began at Indianapolis, May 20, 1879, continued two days, was largely attended, transacted an unusual amount of disciplinary and administrative business, had excellent scientific papers with profitable discussions, and, taken altogether, appears to have been one of the most satisfactory reunions of the State Society members held for a number of years.

Dr. Benj. Newland was president, Dr. W. W. Woolen secretary, and Dr. E. S. Elder was chairman of the committee of arrangements; and it was to the intelligent attention the last-named gentleman gave to the duties of his position that the large size and happy success of the meeting was in a large measure due.

The state society is composed of members of county societies, and there are fifty-eight county societies, with an aggregate membership of nine hundred and twenty-seven. The finances of the state society are in good condition, and there is evidence of healthy and vigorous vitality generally in the organization.

Dr. J. R. Weist, of Wayne county, was elected president for the year ensuing; Dr. J. D. Gatch, of Dearborn county, vice president; Dr. G. V. Woolen, of Indianapolis, secretary; Dr. G. W. Burton, of Lawrence county, assistant secretary; Dr. G. W. H. Kemper, of Delaware county, treasurer; and Dr. F. J. Van Vorhis, of Indianapolis, librarian. The next meeting to be held in Indianapolis, beginning on the third Tuesday of May, 1880, at ten o'clock, A. M.

Eleven papers of a professional scientific character were read by their authors before the assembly. Of these one was

chiefly on State Medicine, three on Practical Medicine, two on Obstetrics, four on Surgery, and one on Eye Surgery.

"The Relations of Legislation to Sanitary Protection," by Benj. Newland, M. D., of Bedford, Ind. President Newland opens his carefully written address with an allusion to the difference between the Aristotelian and the Baconian philosophies, and pays a tribute to the science of the present by saying that it takes a handful of sand and from it molds a lens that carries the human vision to myriads of otherwise unseen worlds in the starry depths; and from a pinch of similar sand fashions a microscopic objective that enables the scientist to peer down into nature, and find other new worlds as wonderful for their nearness and diminutiveness as are the former for their distance and their magnitude.

Tracing rapidly the development of the knowledge of the nature of true government, the author points out the conviction, now wide spread and spreading, that governments must have a care for the sanitary welfare of their people, both in the way of preventing disease and relieving the afflicted. He deplores the mischief done by proprietary medicines, and suggests how the law might interfere to lessen the evil; tells of the wrong inflicted on the ailing by incompetent doctors, and would have legal methods of measuring the qualifications of all who set up for physicians; and then comes to the important theme of preventive medicine, insisting, rightfully and judiciously, that the time is with us in which Indiana must take hold of the sanitary condition of the state and improve it, or be subject to the ignominy of doing less for the welfare of her people than other states near and far; and he wisely insists that this good work must be accomplished through the agency of a State Board of Health, created and clothed with appropriate and adequate power by the legislature. To this end President Newland invokes the untiring efforts of all good doctors in the state to agitate the subject as a means of educating the populace and influencing the legislators.

So much of the president's address as refers to practical

hygiene and general sanitary affairs was referred to Drs. Hibberd, Hobbs and Waterman; and so much as refers to the suppression of irregular medicine by legislation, was referred to Drs. Sutton, Van Vorhis and Haughton, as committees respectively, to report to the next annual meeting of the society.

"Diseases Prevalent in the Early Settlement of Kokomo," by C. Richmond, M. D., Kokomo, Ind. Kokomo was settled in the spring of 1845, and in the autumn of the same year the settlers suffered severely from intermittent fever, followed in the winter by a *mal innominata*, affecting the alimentary mucous membrane from the lips to the anus, and sometimes reaching a part of the cutaneous surface. The symptoms given indicate a dry inflammation. In the spring of 1847 there were twenty-two cases of something—perhaps malignant erysipelas—of which all but two died in from six hours to two weeks.

"Rational Treatment of Dysentery," by Geo. L. Andrew, M. D., of Laporte, Ind. The practical, new and important feature of this paper is contained in the statement that a man aged eighteen years, laboring under a severe acute dysentery, was treated with ordinary remedies without relief from suffering or any improvement in the symptoms, and was then given two grams of fluid extract of ergot every three hours, with speedy relief from tormina, tenesmus and bloody discharges. It is a brief and good essay.

"Death from Chloroform," by W. W. Vinnedge, M. D., of Lafayette, Ind. A man about thirty years old, apparently in good and vigorous condition, in March last, had an eye enucleated under chloroform, and died just as the operation was completed. Examination after death revealed a fatty heart. When will doctors practically recognize the difference between chloroform and ether as anesthetics?

"Statistics of Placenta Previa," by Enoch W. King, M. D., of Galena, Ind. One hundred and thirteen cases of placenta previa were collected by the author from practitioners in Indiana; and these he first tabulates alphabetically by reporters'

names, and then analyzes them as to all leading features presented, making a series of instructive tables, but not differing materially in results from other larger collections with which he compares them. Dr. King was requested, by a vote of the society, to continue his labors and report in 1880.

"Immediate Placental Delivery in Natural Labor," by E. S. Elder, M. D., of Indianapolis. Dr. Elder's theory is that delivery of the placenta should be as nearly coincident with the delivery of the child as may be, and this result he works for by massage of the fundus of the uterus through the abdominal walls as the child passes the outlet, endeavoring thereby to induce the expulsion of the secundines by the same pains that effect the delivery of the child. If this measure is not sufficient he immediately, before any attention to the newborn, gives manual assistance, per vaginam, insisting that where such manipulation is called for it should be done before the maternal organs have recovered from the shock caused by the passage of the child, for the dual reason that it is less perturbing to the mother and more facile for the accoucheur. Illustrating his theory by the detail of seven cases in practice, Dr. Elder claims to have established these advantages for his process:

1. Security against post partum hemorrhage.
2. Security against hour-glass contraction
3. Security against uterine inertia.
4. Security against adherent and retained placenta.
5. Security against frequent severe protracted after-pains.
6. Security against septicemia and prolonged lochial discharge.
7. It saves valuable time.
8. It saves suffering and anxiety on the part of the mother.
9. It is better for the child, as the cord is not ligated until the placenta is delivered.
10. It is in accordance with the natural indications, and carrying out the physiological indications of the process of complete parturition.

This is an instructive essay.

"Excision of the Knee-Joint, with Cases," by Joseph Eastman, M. D., of Indianapolis. Three successful cases of this operation are narrated in the paper as a foundation for remarks, wherein the author claims that excision of the knee-joint is a less hazardous undertaking than amputation in the lower third of the thigh, and leaves a far more useful limb. For the highest success Dr. Eastman insists on the observance of certain features in the operation, which he points out in detail:

1. A transverse incision across the joint below the patella, the extremities carried well back for drainage.
 2. Flaps of skin only.
 3. Removal of patella.
 4. After the bones are sawed off, clip away all synovial membrane, ligaments and thickened tissue, dissect out old sinuses, and preserve no periosteum except on healthy bones.
 5. Do not wire the bones together.
 6. Secure union by first intention, except at angles for drainage.
 7. Consider antiseptic spray a *sine qua non*.
- This paper is a credit to its author.

"Affections of the Gall Bladder tending to result in Cutaneous Biliary Fistula," by G. W. H. Kemper, M. D., Muncie. Concise histories of one case of his own and ten collated from various sources are given by the author, and then follow comments on the conditions attending or inducing these disorders, the pathological changes, the diagnosis and treatment. Full credit is given to the late Dr. Bobbs, of Indianapolis, for the first operation of cholecystotomy, though it appears he did not know what he was doing until he had done it.

"Perineal Section for Stricture of the Urethra," by J. A. Sutcliffe, M. D., Indianapolis. This is the report of a successful operation for the relief of a stricture of twenty years' standing, so obliterating the urethra that no urine passed it, nor could any kind of an instrument be carried into the bladder as a guide to the cutting. It was a difficult operation neatly performed.

"Case of Fracture of the Cervical Spine," by R. E. Haughton, M. D., of Indianapolis. A man in a well had a loaded bucket weighing fifty pounds fall twenty feet on to the back of his head and neck. Dr. H. attended him three weeks, when he was sent to the hospital, where he died at the end of three or four weeks more. The remainder of the paper is taken up with sundry professional reflections suggested by the man in the well, narrated in the author's usual lucid and felicitous style.

"Some Diseases of the Eye in which Operative Interference is Indispensable," by J. L. Thompson, M. D., Indianapolis. This is a bright and cheerful communication from a specialist to the general practitioner, full of kindly thoughts, practical suggestions, and classical witticisms. Some general practitioners do not like such papers from specialists, but the reviewer does, and he thanks Dr. Thompson for his practical and valuable suggestions, and the agreeable manner of their making.

The volume is well edited, and the publishing committee should have the thanks of the members of the state society for the careful and creditable manner in which they have executed their duties.

J. F. H.

A Treatise on Hygiene and Public Health. Edited by ALBERT H. BUCK, M. D., American Editor of Ziemssen's *Cyclopædia of the Practice of Medicine*. New York: William Wood and Co. 1879.

Two portly volumes, aggregating between fourteen hundred and fifteen hundred pages, form this treatise. The conception of such a work was wise, and the result in every way admirable. The volumes are rich in practical information, and their general perusal by intelligent people, male and female, lay and professional, would do much to limit the utility of Ziemssen, or of any other work on the Practice of Medicine.

The contributors to the first volume are Drs. A. Brayton Ball, John S. Billings, Francis H. Brown, William H. Ford,
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Abraham Jacobi, D. F. Lincoln, James Tyson, and Arthur Van Harlingen, and Prof. William Ripley Nichols. Those who contribute to the second volume are Drs. Thomas B. Curtis, Bache McE. Emmett, Allan McLane Hamilton, S. S. Herrick, D. F. Lincoln, Frederic R. Sturgis, Roger S. Tracy, Thomas J. Turner, and S. Oakley Vander Poel, and Messrs. Rossiter W. Raymond, Stephen P. Sharples, Charles Smart, Henry C. Sheaffer, and Elwyn Walker.

The introduction is by Dr. Billings, and is chiefly occupied with causes of disease and jurisprudence of hygiene. Then follows Part I, which includes infant hygiene, food and drink, drinking water and public water supplies, physical exercise, and the care of the person. Part II discusses soil and water, the atmosphere, and general principles of hospital construction. The above are the subjects considered in the first volume.

In the second volume, first part, the hygiene of occupation, that of camps, that of the naval and merchant marine, of coal mines and metal mines, are presented. The second part, under the head of Public Health, has the following subdivisions: Infant mortality, vital statistics, adulteration of food, public nuisances, quarantine, inland quarantine, small-pox and other contagious diseases, the hygiene of syphilis, disinfectants, village sanitary associations, and school hygiene.

We can not commend these volumes too highly, and we are sure that no physician who purchases and reads them will a moment regret the investment.

Elements of Chemistry. By ADOLPH WURTZ, Professor of Chemistry of the Faculty of Medicine, Paris. Translated from the fourth French edition, by WILLIAM H. GREENE, M. D., Philadelphia. With one hundred and thirty two illustrations. Philadelphia: J. B. Lippincott and Co.

Beginning with some familiar things met with in every-day life, the author points out the nature of elementary substances, and by easy stages and agreeable methods carries the student to the foundation facts of chemistry; and then step by step,

in a clear and lucid style and in an attractive way, leads him through the great fields of chemistry, combining and decomposing as they go, until the student has witnessed the beginning and the end of simples and compounds, and the manipulations of the plainest and most intricate and delicate chemical processes. The student who masters the contents of this book will be master of general elementary chemistry in its latest and highest developments.

J. F. H.

A Guide to the Qualitative and Quantitative Analysis of the Urine.

Designed for Physicians, Chemists and Pharmacists. By Dr. C. NEUBAUER and Dr. J. VOGEL. Translated from the seventh enlarged and revised German edition, by ELBRIDGE G. CUTLER, M. D., Pathologist at the Boston City Hospital. Revised by EDWARD S. WOOD, M. D., Professor of Chemistry in the Medical School of Harvard. New York: William Wood and Co. 1879. Royal octavo. 550 pp.

Since this translation was published Dr. Neubauer has died, but in his part of the book—chemical examination of the urine—he has done thorough work which will live on. The book is divided into two parts; the first chemical, the second (by Dr. Vogel) chiefly medical. In part first is considered, I. Physical and chemical properties of normal urine; II. Normal constituents of the urine—for instance, urea, its presence, preparation, microscopic and chemical properties, nitrate of urea, oxalate of urea, detection; III. Abnormal constituents of urine—for instance, albumen, its presence, etc.; IV. Urinary sediments; V. Accidental constituents. Then follow quantitative estimations—for example, of the amount of urine and the total solids in twenty-four hours, and lastly qualitative and quantitative analyses.

It seems as if Dr. Neubauer had put in this part of the book everything that is necessary, and made it very plain.

Part second, by Dr. Vogel, is probably the portion that the physician will consult the more frequently. It treats of, I. Changes in the color, appearance and odor of the urine;

II. Chemical reaction of the urine; III. Unusual (abnormal) constituents, as albumen, fibrin, blood in the urine, dissolved blood, fat, biliary pigments, biliary acids and sugar—their detection and significance; IV. Urinary sediments; and, lastly, quantitative changes in the urine, with an appendix relative to the examination of urinary calculi and other concretions.

The plates at the end of the volume, while not so numerous as in "The Microscope in Practical Medicine" by Beale, and other works devoted only to the microscopic appearance of the urine, are well engraved, and represent admirably what they purport to do.

Messrs. Wood and Co. have made an experiment in binding this book, in what we believe is cow's skin. It has the appearance of Russia binding, and is very durable, and ornamental to any library, general or medical. The book is printed on heavy paper, and an index closes the volume. A. M.

Transactions of the Pathological Society of Philadelphia. Vol. VIII.

Edited by J. H. C. SIMES, M. D., Lecturer on Histology in the University of Pennsylvania. Philadelphia: J. B. Lippincott and Co. 1879.

This volume embraces the transactions of the society from September, 1877, to July, 1878, and is fully up to the standard of its predecessors. The manner of classifying the matter is similar to the last volume, under the several heads of osseous system, digestive apparatus, vascular system, etc.

Among many interesting specimens presented to the society is one by Dr. O'Hara, of four inches of the rectum excised on account of intussusception caused by a villous tumor; also by Dr. Wardner a rare case of syphilitic disease of the pleura and lung.

Closing the book is a long and excellent article by Dr. James Tyson, on "the causal lesions of puerperal eclampsia," in which the conclusion is reached that *genuine* puerperal convulsions are the result of renal disease.

Clinic of the Month.

HEMORRHAGES IN PERTUSSIS.—M. Henri Roger communicated to the *Académie de Médecine*, *Archives Générales*, a clinical study upon hemorrhages occurring in whooping cough, and especially upon hemoptysis and pseudo-hemoptysis. The hemorrhages are due to the intense and multiple congestions that this affection causes, to alterations by an irritative process of the walls of the capillaries, and finally to an impoverishment of the blood resulting in a loss of its plasticity. These occur sometimes at the surface of a mucous membrane, and the blood flows out; sometimes in the subcutaneous or submucous connective tissue; sometimes at the surface of a wound or of an ulceration; more rarely in a visceral cavity or in a serous pouch, and it is exceptionally that the blood is infiltrated into a parenchymatous structure.

Epistaxis is the most frequent; generally slight, nevertheless it may become a serious accident by its abundance and repetition. Subconjunctival hemorrhage is not rare, and is produced by a violent shock of convulsive cough; without prognostic, it has a semeiotic value, for it may point to the disease which the pathognomonic cough soon confirms. Hemorrhages at the surface of the conjunctiva, as well as those of the external auditory canal, are infrequent. More rare still are subpleural hemorrhages, pulmonary apoplexy, blood effusion into the great cavity of the arachnoid, and especially effusions into parenchymatous structures.

The author gave more especial attention to buccal hemorrhages, the next most frequent to epistaxis, and brought out prominently the error into which so many practitioners have fallen—of taking for hemoptysis, or hematemesis, a simple hemorrhage from the mouth which is without any serious import.

URINARY TUBERCULOSIS.—The following are the conclusions of Dr. O. Tapret, to a paper on this subject, in the *Archives Générales* for October:

1. Urinary tuberculosis is more frequent than would be judged from the small number of cases reported. It is rare in the female. It generally occurs between sixteen and forty years.

2. Tubercle may first affect the kidney, the bladder, the prostate and the urethra, and may remain entrenched there; it may be propagated, after a longer or shorter interval and a temporary arrest, to the genital organs or to the lung. Urinary phthisis is rarely associated at the outset with the other manifestations of the diathesis.

3. When the malady begins at the kidney, the commencement is insidious. But if the bladder, neck and trigone be first affected, most frequently certain signs indicate it—such as frequent and painful micturition, hematuria, pus in the urine, etc.

4. The symptoms of vesical tuberculosis are grouped in a variable but regular order, and although some of them may be absent, they form a characteristic morbid collection.

5. Its march, ordinarily chronic, may be hastened by rapid or slow invasion of the testicle or of the lung, rarely of the peritoneum and meninges. Notwithstanding periods of rest longer or shorter, it ends in consumption, and uremia may terminate life.

6. The diagnosis ought to rest upon a thorough knowledge of the value of each symptom. Direct exploration should not be employed except as a means of verification, and then as rarely as possible.

7. Tubercles of the kidney, of the bladder, of the prostate and of the urethra are, as those of the lung, of the meninges, of the peritoneum and of the testicles, presented in all stages of evolution.

8. Its treatment is that of tuberculosis in general. In some cases alterative injections may be tried. The most painful symptoms are lessened by morphia.

9. The occurrence of urinary tuberculosis may furnish light upon other affections, and give information as to the nature of certain morbid pulmonary or genital phenomena.

A MEDICAL RECLAMATION FROM THE DOMAIN OF SURGERY. This is the title of a communication to the Boston Medical and Surgical Journal, by Dr. T. H. Buckler, in regard to the treatment of biliary calculi. In speaking of surgery invading the gall-bladder for the removal of calculi, he says, "if there is any one thing that does and must forever belong exclusively to the department of practical medicine, it is the ready means physicians have at command of always being able to dissolve, in the gall-bladder, cholesteric gall stones with as much certainty as if these same calculi were in a glass tumbler before them."

In 1867, Dr. B. advised the use of succinate of iron as a solvent for gall-stones and of cholesteric fat, whether in the coats of arteries or elsewhere. Chloroform, in doses of five to sixty drops, is also recommended as a solvent of biliary calculi. Dr. B. uses these remedies separately and combined. In two instances the patients—one a man and the other a woman—were able to take a teaspoonful of chloroform every six hours without experiencing the slightest ill effect. These large doses dissolved the calculi within the space of a single week. He further says:—"I have seen a number of cases of gall-stone, all of which, except one, were successfully treated with chloroform to dissolve the cholesterine existing in the gall-bladder at the time, and causing paroxysms of pain amounting to positive anguish, for the relief of which chloroform, the great anesthetic, is also the best agent. After existing calculi have been dissolved, then, to overcome the cholesteric diathesis and prevent the formation of other stones, the patients were all kept on teaspoonful doses, thrice daily, of the succinate of iron for a period of four or six months. The large majority of patients can not take by the stomach more than ten or fifteen drops of chloroform every four or six hours, in which cases it should be continued fifteen or twenty days."

NASO PHARYNGEAL CATARRH.—In the October number of the Medical News and Library is a clinical lecture on the above subject by Dr. J. Solis Cohen, from which we extract some passages relative to thorough cleansing, as a *sine qua non* in the treatment. He says:

What are we to do with these cases? The first thing is to examine the parts affected, and note their condition. We look into the nose of the patient, and find that it is more or less filled with thickened mucus. This must be gotten rid of before the parts can be properly inspected. It is necessary, therefore, to wash the parts out. This may be done by means of the syringe, the spray apparatus, or the nasal douche.

The process is the same precisely as is requisite daily, or more frequently, to rid the parts of the secretions as they accumulate, so as to make the first break into the vicious circle of cause and effect reacting on each other. Break up this circle by keeping the parts as thoroughly clean as possible, and your patient will be more than half cured. Cleansing is the principal factor in the treatment, often efficient by itself to cure simple inflammatory cases. But it must be thorough. Relieve the diseased mucous membrane from the burden of these masses as they accumulate, and you give its blood a chance to regenerate fully formed ciliary epithelia which soon straightway begin to brush out the light layers of secretion themselves, and thus you gradually restore the normal condition. Even in cases of constitutional diathesis, this cleansing process is equally essential, though not so directly curative. Your constitutional remedies will be necessary to overcome the effects of the diathesis which interferes with the proper nutrition of the part; but the mechanical treatment is necessary to clear the way, and keep the way clear.

The fluid usually employed for cleansing purposes is tepid water at about blood heat, brought up to the specific gravity of the blood with some saline. We usually employ common table salt in the proportion of one drachm to the quart. In cases where the masses are very adherent, it is often better to use carbonate of sodium in the same proportion. Other

ingredients used in similar manner are chloride of potassium and chloride of ammonium.

Stress has been laid on the necessity for as thorough removal of these masses of secretion, or excretion, as practicable. There is no other means of verifying thorough removal than frequent examination of the parts, anteriorly and posteriorly, by direct inspection, and with the aid of a mirror passed behind the palate. It will frequently happen that an hour may be consumed in getting entirely rid of these accumulations; and it is my own custom to persevere until they are removed, unless the patient shows signs of great fatigue, or the parts give indication of undue irritation.

Sometimes the forceps, hair-pencil, or a wad of absorbent cotton, can be used to detach matters within reach, and which resist expulsion by the douche or syringe.

The simplest method of cleansing, which is very efficient when the masses of secretion are not excessive or very adherent, is to let the patient dip his nose into a vessel of warm salt water, and sniff it up by insufflation into the pharynx, discharging it by the mouth. A similar plan, though less efficacious, is to draw the fluid up from the palm of the hand, repeating it with the head in different positions so as to favor contact with the various surfaces in succession.

Dr. Cohen also says a syringe may be used first on one side, then on the other, or a long curved syringe may be passed behind the palate and the fluid discharged through the nasal passages from behind forward. Another method of cleansing the nasal passages is to use what is known as Thudichum's nasal douche. The patient is to be cautioned against swallowing during the manipulation, lest the fluid be forced up the Eustachian tubes into the middle ear; where it might excite otitis media, as sometimes happens, not only in the use of the douche, but in every other method of cleansing the nasal passages—even the simplest of all, snuffing the fluid up from the palm of the hand. If movements of swallowing are avoided there will be but little likelihood of flooding the Eustachian tube; and if the fluid be warm there will be little

danger of exciting inflammation of the middle ear, even if the Eustachian tube be flooded, as fluids are sometimes intentionally injected up the Eustachian tube in treating catarrhal affections of the middle ear. The first cleansing should be performed under the practitioner's supervision to be certain that it is done correctly. After that it can be left to the patient himself, or to an intelligent attendant. About a quart of the fluid should be injected daily, or twice a day, one-half through each nasal passage.

Getting rid of these accumulations you not only relieve the mucous membrane from the mechanical irritation they keep up, but you rid the air that is breathed of constant impregnation with the products of their decomposition, which impairs the general health, even in some cases to a condition of slow septic poisoning. Once the patient breathes uncontaminated air, his blood is invigorated, his appetite improves, his food is better assimilated; and thus his entire system reacts from depressing influences, and the diseased tissues take on a local healthy action which eventuates in recovery.

AMPUTATION BY ELASTIC LIGATURE OF THE INVERTED UTERUS.—M. Chauvel, *Annales de Gynécologie*, September, narrates a case of uterine inversion in a girl of eighteen, caused by violent traction upon the placenta. Eight months after the accident the patient came under his charge, and after repeated efforts at reduction by taxis and by elastic pressure had failed, he decided upon amputation by the elastic ligature. This ligature was simply a drainage tube, about four millimeters in diameter, encircling the pedicle in a groove made by the actual cautery: the ends of the ligature were firmly tied and further secured by a waxed thread. In eleven days the amputation was completed. The patient perfectly recovered.

Notes and Queries.

THE LONDON PRACTICE OF MIDWIFERY.—Through the kindness of our friend, Dr. G. W. H. Kemper, a copy of this somewhat rare book has come into our possession. This particular volume is the American edition, taken from the sixth London edition, and published in 1826.

"The London Practice" contains much that is of value to the practitioner of to day, but much beside that would be utterly rejected; it also contains many curious scraps of information, a good deal of caustic criticism, and some at least questionable morality. Here is something in regard to Haller, which may be marked curious if true:

"Haller had a peculiar method of procuring his information: he would take pains to discover the favorite pursuits of a student, and then desired to make extracts from his observations for his perusal; by this means he acquired much information with little comparative trouble: though this was sometimes productive of error; for, having extracts from magazines and even newspapers, a great deal of nonsense gained admission into Haller's library. In one instance, in particular, he had got an extract from a newspaper, relating to some uncommon diseases among seamen, which was taken from Robinson Crusoe; a history which never existed any where but in the brain of Daniel De Foe. It had been read and copied, no doubt, by a person of no very extensive reading, who believed all that he read."

In discussing the causes of labor, "The Practice" gives some sharp criticism of false theories, as witness the following:

"It has been believed that the fetus finds sustenance in the womb for nine months, and then comes into the world to get something more palatable to eat. It has been supposed that nature has enabled the fetus to exist for nine months in the heat of the body, which is about ninety-six; but that at the expiration of that time it gets too hot. It has been supposed that at the end of nine months the meconium be-

comes acrid, and the child comes into the world to have a stool. It has been said that the child rushes itself into life, because it wishes to breathe, finding itself weary of a fish's life sustained for nine months. The beauty of an hypothesis is to drive straight forward, turning neither to the one hand nor to the other, never stopping to compare facts. But we know that dead children are brought into the world by the same means and in the same manner as living. If we suppose the navel-string to have become twisted or pressed, or any cause to have been applied, by which the child is killed *in utero*; can we believe it likely that that child, being dead, will find itself hungry and come to eat? Will a dead child fancy itself too hot, and come kicking into the world to cool? Will any dead child feel itself seized with a looseness, and come scrambling into the world to have a stool? Or will a dead child find it wants to breathe, and so come into the world in hopes of recovering its life? Or is it probable that a dead child should show a degree of impatience at being in an uneasy posture? And another query may be urged, how is a child dead or alive, while yet in the womb, to know that it shall be born in the pantry or larder?"

The conduct of the practitioner is very fully considered. He is not to wear an apron, for "it looks ill to see a man stalking about dressed as if he was an executioner." If a stranger, he is to ingratiate himself with the patient after this manner:

"With this view it is very easy to remark on her family, that Richard is the picture of his papa, and that little Miss Sally has the countenance of her mamma, observing that the girls are the handsomest, and how natural it is to expect that they should be so; that it rained yesterday, but has a fairer prospect to day; that the wind was yesterday in the north, but to-day to the east; that the weather is very odd for the time of year, but there is reason to expect it will soon change for the better."

The garrulous women who crowd the lying-in room, freely telling all the dreadful cases of parturition, are to have their stories answered thus:

"Well, you certainly have been very industrious in collecting all these wonderful stories that ever were heard; I have made it my business, but never saw one half of what you relate;" hinting that he does not believe any thing about it."

When these guests are too annoying, meddling and mischievous, "The Practice" proposes this method of getting rid of them—a method the morality of which does not seem

quite so obvious, as the reflection on woman's ability to keep a secret:

"When such company is unavoidable, the best way to get rid of them is, to make a confidant of some one, telling her, as a profound secret, that the lady will not be delivered before to-morrow morning; this she will tell to another as a great secret, which will in a short time be known to all the company as one of the most inviolable secrets, and perhaps the patient herself will know of it; however, if the women, who in this case are of no comfort to the patient, and often a great interruption to the practitioner, are got rid of, that is sufficient."

The book gives the following injunctions to the obstetrician as to his manner, and with this extract we take leave of it for the present:

"It is of infinite consequence that the practitioner should always be cheerful and unembarrassed: the mere appearance of his being tired, in a tedious labor, will produce a bad effect on the woman; he should appear cheerful, but not gay, the occasion does not warrant that. It is astonishing how great an advantage it is to have a pleasant smiling countenance: naturally it is very prizable; but when a man carries the picture of ill luck in his face, certainly he is to be pitied; it is then politic to make the best of a bad bargain, polish it up by a good humor and habit as well as he can, as Swift says in his *Pastry-Cook*, that the man

—— 'chiefly show'd his art,
Of much foul dough to make a savory tart.'"

YELLOW FEVER.—The following from Dr. McAllister, Port Gibson, Miss., is a supplement to his paper, which appeared in this journal for June, 1879.*

The most of the symptoms of yellow fever are common to other fevers; the eyes are sometimes red, and sometimes glassy. I believe the most constant symptom is the milk-white tongue. When the skin is hot and dry, some form of cold bath is always demanded; and when the symptoms are urgent in the early stages, I prefer the

*In Dr. McAllister's article in the June number, in abbreviating some sentences the ideas were changed. The sentence "morphine will control irritability," should read "when the vascular action is controlled morphine acts well," etc. Again, in speaking of the disease running on without any improvement in the symptoms, "there comes on a delusive condition sometimes, without fever." It should read "*called* without fever." In the Practitioner the term "second bleeding" is used; it should be "continuous bleeding."

heavy shower to fall from as great a height as possible on the head, shoulders and body. The patient can sit in an empty tub in a nude condition while the bath is being used, and during the time the body should be freely rubbed with wet cloths. When the pulse and temperature are modified, and the patient a little shivery, it should cease and the patient be well warmed in a bed; and if, after an hour, the symptoms should return, the same process can be repeated; or do that which sometimes acts as well, pour cold water freely on the head and back of the neck, and rub the body well with cloths wet with cold water. Under this treatment there is always marked and permanent improvement soon.

There will be one or more remissions in twenty-four hours, generally in the morning. This should be improved by the addition of a little more covering for a few hours. And if vascular action be controlled, morphia will act well; but if it be administered previous to this time, it will do harm. When the patient is doing well, let him be comfortable, and attend to the indications of nature.

Continual bleeding throughout the whole course of the disease, in a horizontal position, was first suggested to my mind by a desire to bleed without producing nervous irritability, and by observing the comparative comfort and ultimate recovery of cases in which hemorrhage from the gums commenced early in the disease, and continued throughout its whole course.

The patient should be put on a low bed or pallet. Devise means to prevent the bedclothes from being soiled. Open a vein or veins. Take off the bandage. Let the blood flow constantly day and night, unless there should be a decided change in the symptoms. The patient should retain the horizontal position as much as possible while the bleeding is going on. If he has occasion to rise, stop the bleeding until he assumes the horizontal posture; then let it flow. Syncope is not desirable; if there should be symptoms of it, the bleeding should cease until they pass off. If free perspiration should occur the bleeding should cease, to commence again if the symptoms returned. The bleeding will not interfere with any of the practice, unless there be improvement in the symptoms; if they should persist, and with a hot, dry skin, the bleeding should cease until the bath is used, when after an hour or two, if there is no change, it should be continued. There is no danger from bleeding in this way. Nature will accommodate herself to the loss of blood. I believe the patient could be left with safety, for a time at least.

Indeed if we were pressed with business, and attendants scarce, and the patient had to be neglected, I believe to administer to him the bath, a cathartic, and put the blood to flowing in the manner recommended above, would afford him the surest possible chance for life.

I always endeavor to make my patients as comfortable as possible throughout the whole course of the disease, believing it to be curative. Avoid nauseous drugs as much as possible, and loathsome practices. Let the patients have free ventilation. Don't oppress them with bedclothes, especially if they are hot or restless. Give them plenty of acidulated and effervescing drinks. Have the body rubbed freely at least once a day with dry cloths, and clean clothes put on, and also on the beds. Let some discreet person hold a few minutes' agreeable conversation with them occasionally. Have no idle gazers about. Present them with flowers and agreeable pictures. Change the position of the bed, and the scenery in the room, if convenient. Let some friend sit by them, and rub the head gently with the hand and ends of the fingers, if it be agreeable. It is in convalescence, and when the symptoms are healthful and the skin cool, that the greatest care is necessary to protect them from too much coolness. I believe that true convalescence is as favorable in yellow fever as in any other.

CHLORAL HYDRATE LINIMENT, SALVE, PLASTER AND SUPPOSITORIES.—In the *Memorabilien*, September 30, 1879, there are a number of useful receipts given for the employment of chloral hydrate. We give them below:

Linimentum Chlorali Hydrati.—Take of chloral hydrate ten grams; reduce to a fine powder, and add of oil of sweet almonds fifty grams. Digest by agitating until a solution has been effected.

Unguentum Chlorali Hydrati.—Take of chloral hydrate ten grams; reduce to a fine powder and dissolve in lard forty-five grams, and before melting add five grams of yellow wax; and after a solution is made pour into a jar and let it cool.

Emplastrum Chlorali Hydrati.—Take of chloral hydrate ten grams finely powdered; dissolve in yellow wax thirty grams, beef suet twenty grams; melt and stir the mass until it cools.

Suppositoria cum Chloralo Hydrato.—No. 1. Take of chloral hydrate five grams; reduce to a powder, and dissolve by digesting in yellow wax five grams, oil of cacao fifteen grams; melt and pour into molds, so that five suppositories may be made.

No. 2. Chloral hydrate ten grams, yellow wax seven and a half grams, oil of cacao twelve and a half grams; mix, and make as above for five suppositories.

Suppositoria Vaginalia cum Chloralo Hydrato.—Take chloral hydrate twenty grams; triturate and dissolve in yellow wax and beef suet, each twenty grams, lard thirty grams; melt, and make the cooling mass into five cylindrical suppositories.

MARGUERITE MALAURE.—Saviard, in his *Surgical Observations*, tells the story of this unfortunate woman. She had complete procidentia of the uterus, and the municipal authorities of Toulouse compelled her to wear man's clothes under penalty of bodily punishment. She came to Paris in 1693, and made some money exhibiting herself as an hermaphrodite. Finally, she was brought to Saviard at the *Hôtel Dieu*, who recognized the nature of the case, and notwithstanding the displacement had existed for many years, reduced it. Marguerite was thus restored to her sex, but a royal ordinance was requisite to restore her to her civil state.